e Iron

A Review of the Hardware, Iron and Metal Trades.

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tory, Pittsburgh, Pa.

One of the best known of the iron firms of ing furnace, nail plate rolls, shears and nail factured are of a very superior quality. Pittsburgh is that of Zug & Co., of whose machines, and is ready for shipment when it works, known as the Sable Rolling Mill and arrives at the Thirteenth street front. By this Nail Factory, we give a ground plan on this mode there is no retracing, no extra handling, page. This mill has long been known for its but the most economical manner of manufacmany labor-saving appliances-especially its ture possible to such an establishment. The very economical methods of handling stock. The present site of this establishment was occupied and with the same result. When the river it was the despotism of the Pharaobs which as a mill as early as 1828, making it one of the which fronts these works is in a navigable had built the wonderful pyramids of Egypt, tained enormous losses in connection with in-Baltimore, it will be necessary for bim to lay a oldest rolling mill locations in Western Pennsylvania. The present firm, Zug & Co., came and clay by means of an elevator, which can be erected the splendid cathedrals of Strasburg In 1864, succeeding Graff, Lind- used with but little expense, being operated by and Rouen, but that it was credit which would be quite addled, and we may still derive some mouthly line to Liverpool, to be run in altersey & Co., Lindsey & Co., Zug & Painter, and steam and connected with all the multitude of pierce the obstinate Isthmus of Suez. The ob-

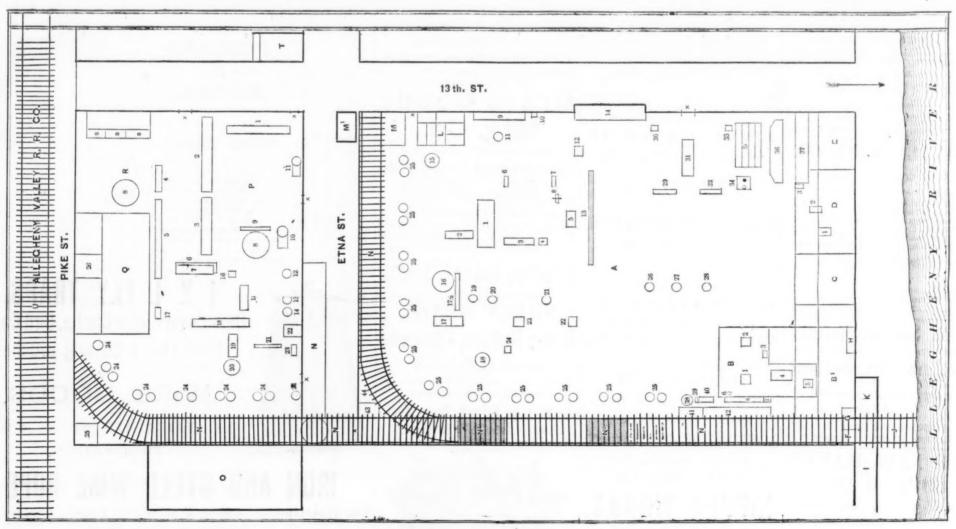
any extra handling. After being puddled the only 10 are common laborers, the balance being defraud the victims who were weak and foolish counts for something, and will help us to tide ball passes to the muck rolls, thence to the heat-skilled workmen. The iron and nails manu-

The Power of Credit.

The London Mining Journal says: A clever

The Sable Rolling Mill and Nail Fac- through the various processes to nails without when we state that among this large number to say that many of them were only issued to in this dull, stagnant 1877. Peace, at any rate, enough to give good money for them. The over the difficulties of the moment. Peace will Germans, again, on the close of their struggle also assist the return of that sound and legitiwith France in 1871 embarked in all kinds of doubtful undertakings, which landed them in our iron and coal trades are so earnestly longsuch heavy losses that credit is at present aling. most as weak in Germany as it is in Great Britain and the United States. Then our

If President Garrett, of the Baltimore and to roost in 1875-in other words, we have sus- freight to all the steamship lines projected from bonds. The Egyptian egg does not appear to freight cars. The latest project is a semithe from trade. It was and has been for years a favorite project of the senior member of the



GROUND PLAN OF THE SABLE IRON AND NAIL WORKS, ZUG & CO., PITTSBURGH, PA.

A-48, Bricklayers' tool and stock room.

5, Pump for supplying mill with water.

- A-Main building. 1, 23 inch engine, driving muck and bar mills.
 2, Muck mill.

- 5. Double engine for driving shears, saw, lathe,
- 6. 7 Shoars for har from
- 9, Lathe for turning rolls. 10, Grindstone for turner.
- 11, Water plug.
- 12, Scales for bar iron. 13, Racks for stock.
- 14. Platform for shipping.
- 15, Fountain and wash basin. 16, Squeezer for puddled iron.
- 17. Shear and elevator for muck iron
- 17%. Scales for weighing muck iron. 18. Fountain and supply for cooling muck bar. 19, 20, 21, Heating furnaces for muck and bar mill.
- 24, Scales for weighing muck bar. 25, 25 puddling furnaces. 26, 27, 28, Heating furnaces for 8 and 10 inch

 - 29, 10 inch guide and hoop mill. 30, 10 inch mill shear.

A-22, 23, Shears for cutting muck iron.

- 31, 94 inch engine, driving 8 and 10 inch mills.
- 32, 8 inch guide mill.
- 33, 8 inch mill shear.
- 84, Pump house, containing two pumps for supplying boilers
- 35, 4 two-flued boilers. 36, Four sections Wiegand tubular boilers.
- 38, Ore pulverizer.
- 39, Ore elevator.
- 41, Clay stock house.
- 40, Ore crusher (Blake).
- 6, Fan. 8, Boiler.
 - B1 -Stock coal bins.

44, Fire brick room B-Blacksmith shop.

4, 18 inch engine.

1, 2, Double forge fires.

- C-Sand yard. D-Scrap iron house
- 1, Shear for heavy scrap.
 2, Shear for light scrap.
- 3. Grindstone
- F-Elevator for cinder, ashes, etc.
- G-Double elevator for sand, clay, brick, coal, etc.
- H-Water closets. I-Railway for taking ashes away from elevator.
- 4, 5, Grindstones. , Tool cupboards for nailers.

Nº-Railroad bridge across Ætna street.

1. Nail machines for cold cut nails.

J-Railway to river.

MI-Scales.

O-Metal yard.

P-Nail mill and factory.

turner, and rollers.

7, 18 inch engine for driving nall machines, grindstones, etc.

K-Bins for refuse fire brick.
L-Store and tool rooms for engineer, millwright,

N-Ground and elevated railway for moving metal,

coal, ashes, cinder, clay, ore, brick, etc., etc.

- 8, 8 circular heating furnaces for nail plate. 9, Tool cupboards for nailers and other hands.
- 10, Annealing furnace for clinch nails.

But even troubles bring with them some and announces that the establishment of the compensating advantages, and the rather dis- new line is probable. He will wait, however, The buildings cover an area of about three world, have examined these works, and all agree century commercial world, and the reason that mal experience which we have acquired during until freights are a little higher. of merchant iron and 6000 tons of nails. The for which they are used, viz., the manufacture most parts of the globe-and we must except at the same time grown more cautious, and of the great Northern lakes, is the feature of works are connected by a switch with the Alle- of iron and nails. Every appliance known to the Australias from the remark-shows at caution is, of course, a virtue and a merit. If the lake trade during the last three years. The gheny Valley Railroad, thereby enabling all save labor in handling large quantities of iron present a prolonged weakness and languor. we have failed to keep the investment ball roll. number employed in 1876 is reported to have raw material to be brought to the mills and un- and the various materials used in its manufactred to be for credit burned ing as merrily—that is, as excitably and as verbeen 885, their tonnage being 190,367. The loaded without much expense. An idea may ture, are to be found here, and some to be its fingers; and like a burned child it now dreads tighously—as in 1871 and 1872, we have ac-number of sailing vessels has fallen off heavily. be formed of the great saving by this mode found in no other works. The senior Mr. Zug the fire—that is, it shuns speculative enterprise cumulated capital notwithstanding; and our decreasing from 3208 in 1872 to 1382; the tonwhen we state that in one day 100 tons coal, is the inventor of a patent automatic lift for even of a comparatively mild and innocuous savings have gone into securities of a sounder nage, however, not going down in quite the 200 tons pig metal and 50 tons ore, beside fire depositing the muck bar at the heating fur-type. Five years ago we were overdoing it and more reliable type. Then the failure of same proportion, but to such an extent that naces. It is attached to the muck shears, with a vengeance. We were taking doubtful credit appears to us to have assisted, after all, there were 200,000 tons less in the trade last without any special preparation, and at the and when the iron is cut it falls into a American railroad bonds by the hundred or by to maintain the peace of Europe. It is too year than in 1872. The change from sail to same time without any hindrance as to shipping large basket and is elevated and deposited at the thousand; we were lending to rotten South much to suppose that Russia has lost her old steam on the great lakes is full of encouragethe doors of the different heating furnaces, American republics; we were founding semi-ambition all at once, or that her vast standing ment to New York. Not only was this the ease with us in Great But Russian credit has grown weak, and Rus-The firm employ 450 hands when running Britain but the Americans were also overdoing sian loans cannot in consequence be raised so Glasgow, within the last year, in successive

12, 13, 14, Heating furnaces for nail mill.

15, Nail mill.

16, Nail plate shears (light).

17, Nail plate shears (heavy). 18, 28 inch engine for driving muck and nail mills.

19 Muck mill.

20, Squeezers for puddled iron.

21. Scales for w 22, Elevator for muck fron (sheared for nail plate).

24, 24 puddling furnaces for making nail muck

25, Stock house for fire brick.

26, Lime house Q-Lumber yard.

R-Stock house for nail kegs.

S-Small rooms for spare parts of nail machines. T-General offices

-Allegheny Valley Railway.

x x x-Entrances.

He made the regulation call on Mr. Garrett,

The rapid increase of steamers on the chain

There has been shipped from this port to Pig metal, &c., is unloaded at the west end double turn and 300 when on single turn, and adjacent to the boiling furnace, and passes the arrangements can be more fully appreciated municipal bonds, of which it is not too much pelled, apparently, to adopt a policy of repose plete—cars, mules and all.

firm to have the most complete mill in its con- a much better idea of the general arrange- realized. We have lived—at any rate, some of ness of credit in Europe, and for the matter of Baltimore this week in regard to the matter. brick, clay, sand, &c., have been unloaded and running the mill or additional expense for The nail factory is situate on the south side of the rolls until it is ready for heating.

Ætna street, running west to Thirteenth street.

struction, arrangement and appliances in the ment of the works, machinery employed, &c., us have lived-to witness the piercing of the that upon both sides of the Atlantic. country, and in furtherance of this project than we could in words. Ironmasters from all Suez Canal with the aid of the great modern large sums of money have been expended. parts of this country, as well as from the old magician—credit. Credit rules the nineteenth acres, and the works produce about 18,000 tons that no other establishment in this or any other that world is just now unmistakably out of the last two years has taught us some salutary of fron annually -12,000 tons of various kinds country is in any way superior for the purposes sorts is to be found in the fact that credit in lessons. If we have become poorer, we have thereby saving all labor from the time it leaves useless limited liability companies by the score. army is to be demolished for good and all. Metals.

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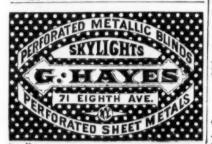
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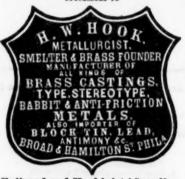
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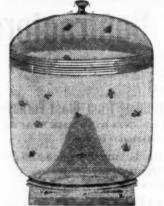
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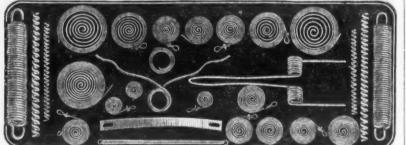


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Modern War Ships.

The London Times says : The Chinese empire being made acquainted with the Greek alphabet under novel and striking circumstances. Alpha and Beta have already arrived in China. the character of two Mosquito gunboats, which on small dimensions carry very heavy ordnance; Gamma and Delta, their sister ships, are bound for the same destination; and two more, the Spey and Tay, were tried in Stokes Bay, on Thursday and Friday last. From the time when the first iron-clads were built and the contest between guns and armor beganthe gun growing yearly more important in the ize and destructiveness of its projectile, and the ship becoming yearly more claborate in its contrivances, first for excluding, and then for surviving the impact of, heavy shot and shell the question of the proper unit of naval strength has been in course of development, If you could only build a manageable ship and lothe it in armor plating which the gun of the day would fail to penetrate, the limits of size were such alone as your harbors and docks im-The more men and guns your war ship carried, the greater were her power and utility. Once persuade the nations of the world to fore go torpedoes and abandon guns beyond the size of the 68 pounder, and the Minotaur and Northumberland might well be the type to adopt and multiply. But let it appear to be more than probable that a structure which has ost half a million of money and carries six or seven hundred men may sink in a naval engagement if hit by a single shell or torpedo, and the question arises, Is it wise to concen trate in one vessel so large a portion of your strength? Should not dispersion, rather than oncentration, be the policy of the naval architect and commander? Skirmishing and open order are the accepted tactics by land for encountering guns of precision; should not your naval tactics furnish some analogy to the land warfare? What would become of armies, even of the present portentous size, if one projectile ould annibilate a brigade?

An answer to the naval problem is supplied by Mr. George Rendel, a member of the Elswick firm. His first contrivance was the gunoat Staunch, which has already been adopted y the English Navy. He said, in effect : "If may subordinate the ship to the gun, I can float and fire, on very small tonuage, a gun which will pierce the heaviest armor affoat." The finest iron-clad then affoat was the Hercules, which had cost, perhaps, £500,000. "For housings-that is, between the side frames; that money," said Mr. Rendel, "I can build others will plane work 12 times that size. In ten or a dozen Staunches, move them from point to point, as required, along the coast, and to one about two feet between the posts, as defend several harbors which an enemy may there are probably more of that size in use than threaten. They will be floating gun carriages, any other. It is not possible, at least not pracand little more; they will carry no defensive armor, but their diminutive size will be their demanding that will not spring by its own weight. up their positions in shallower water than she can spring it, and if made of any of the ordinary verging fire upon the weak parts of her harness." The new Chinese gunboats are a development of the same idea. The Alpha, Beta, Gamma and Delta have a displacement of 400 tons, engines of 310 horse-power, a speed of 9 work done upon it winding to exactly the same knots and a draught of only 8 feet; yet the extent also. To prevent the winding of the bed, first two carry each a 271/2 ton gun and the and most powerful ordnance yet afloat, capable of penetrating 18 inches of srmor, and there-Duilio. The Inflexible will carry heavier guns, and the Thunderer has already guns of equal weight; but the Woolwich gun of 38 tons powder charge than the Elswick gun, with which the Gamma and the Delta are equipped. The guns are worked by hydraulic power. They are fixed irremovably along the center line of other carriage than the boat itself. The projectiles are brought from the magazines below to the loading position by a simple and ingenious device, and are then thrust home by a methe hydraulic p presses and runs the guns in and out, and they is it that a machine cannot be kept true unless are trained by means of the helm. We do not wonder that his excellency Kuo Ta-jen, the Chinese Envoy Extraordinary, and the distinguished party which attended him the other day to see the boats handled and fired at sea before starting on their voyage out to China, were amazed at the results produced on such restricted lines. Our correspondent was correct the Gamma and the Delta in the English navy which is effective at a distance of 800 yards. Four hundred rounds were fired from the Gatling gun, his excellency taking his turn at the handle, and delivering a well sustained fire, under which no boat could have lived. If these boats reach China safe, and are fought as well factory. as they have been designed, they will form a serious obstacle to a hostile fleet attempting the entrance of the Chinese rivers.

sciences shipbuilding is the creature of comlike many a prouder craft, will fall victims to the torpedo and the ram. But it must be remonster which is launched into the world with propriations by Congress were much smaller the greatest imaginable pretensions and the than had been expected.

nost confident vaticinations of success. The policy of dispersion, as opposed to conc tion, aspires, not to prevent disaster, but to re duce its proportions and to render it less calamitous. The loss in action of a ship like the Sultan would be a sensible diminution of naval trength; while the loss of two or three Staunches might be borne with comparative resignation; and there is too great a tendency in our naval critics to forget the probability of a first-class iron-clad falling a victim to a single shot. A thoughtful and intelligent paper on the English navy has just been published by Mr. G. Shaw Lefevre, in which he bases his comparison of the Continental fleets on a fanciful system of marks invented by a scientific Frenchman. This ingenious philosopher distributes his marks like au English governess to her pupils-so many for this accomplishment, and so many for that, and so many for eneral deportment. But, if we are not mistaken, the guns of the Gamma and the Delta and their sister gunboats would bring to a level many of these fancled differences, and it would be found, after all, that in a sea fight, with equal skill in the handling, the battle would go to the greatest number. Some fron-clads are stronger than other iron-clads, but against gun, torpedo, and ram all iron-clads are weak. They are strong to inflict, but weak to sustain an injury, and in a naval war, as in a game of chess, the victory will be to the power which can lose the greatest number of fighting ships and still bring up a powerful reserve, without waiting two years to build them. The analogy of former wars will serve us, but we must not follow it too blindly. Skill and nerve in handling ships-of-war will be still of the utmost value but the direction of projectiles will play a more important part in future than heretofore. Few sons have appreciated the enormous effect of a 1214 inch shell bursting through the armor plates and exploding in the center of an Ironclad, and still fewer know what havoc a torpedo may inflict from below. The greater the effect of a single projectile, the greater the prudence of minimizing the loss it can occasion, and the new gunboats designed for the Chinese government and built and engined in the Tyne, may well furnish a lesson, though, of course, not an exclusive model, for the architects of the Royal navy.

Setting a Planer .- Prof. Sweet, of Gornell University, in a note on setting planing machines, says: Planing machines vary in size; some take work a foot square through the the following argument, imagine my referring fense. If an iron-clad approaches, they will take If made heavier, then there is more weight to enter, and from different points direct a con- forms and rested upon either two diagonal corners, the frame will spring winding; if supported by the opposite corner it will wind in the opposite direction. If the bed of a planer is winding, nothing can prevent its making the assuming it to be first made true, there are two last two a 38 ton gun, which is the heaviest methods. One is to set it upon a substantial stone or brick foundation. To set the machine is a delicate operation, and the foundations are so fore, in favorable circumstances, of sinking or costly that but one in a hundred of this size disabling at one shot any iron-clad built or are ever placed upon them. The other plan is building, except, perhaps, the Inflexible or the one I have adopted, and with the very best success. It is supporting the machine upon the single support at one end-in other words, resting the machine on three points. I can throws a lighter projectile and burns a smaller hardly conceive it possible for anyone to have a better test than our surface plate work; for before this was done we could plane them winding either way at will by simply loading the floor on which the planer rested, while now it the boat, and rest upon trunnion blocks which is seldom that we detect the slightest difference. work upon a couple of beam slides, without any If there is any one thing that I think I know better than another in regard to machine construction, it is that all machines likely to be set upon a floor, which cannot be supported upon a single column, as our milling and shaping chapical rammer working beneath the glacis machine, should be rested upon three points. plates at the bow. A gunner in the pilot house As certain as a surface plate cannot be made true unless rested upon three points, so certain supported on the same principle.

Baking Japans .- We have had the pleasure of inspecting, in the tipware and house furnishing establishment of Messrs. E. Ketcham & Co., in this city, a line of goods finished with one cost only of Japan, which presented an appearance equal in all respects to some goods we in saying that there is nothing comparable to have seen which had been gone over repeatedly. The stock with which these articles were Not only do the gunboats carry one monster finished we learned was from the manufactory armor piercing gun, but they carry each, beside, two 12 pounder breech loading guns on their Flushing avenues and Ferry street, Brooklyn, quarters, and a 10 chambered Gatling gun, and its character was certainly very creditable to the firm. We also saw some other varieties of goods, such as tea-pot handles, etc., finished over a priming of lampblack and oil with Japan obtained from the same source, which exhibited a bardness and luster entirely satis-

Progress is reported at the Greenwich Observatery in reducing the observations made on Nothing is perfect in this world, and of all the last transit of Venus. Two of the most recent calculations required the use of 3,000,000 promise. These Mosquito gunboats, however figures. The French attempts at obtaining tormenticg in their offensive capacities, are as new figures for the sun's distance by the study weak defensively as the insect from which they take their name. It will not require an 800 have been reported as turning out badly; it is membered that such a fate befell the Vanguard graphs taken by the American expeditions, but also, and such a fate may befall many another the work proceeds very slowly because the apKron.

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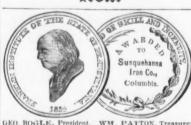
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temperature, the cold air to supply the flame passes directly through its center. The impornation of the bed was tance of keeping the oil cool is very great, but slways the same fire clay, the roof varies a

was found. In Lancashire they had from 20 to 30 beds of coal, and how did they get there? We illustrate herewith a double oil stove The levels of land and sea were constantly called the "Summer Comfort," intended for changing, and were changing at the present ight cooking of all kinds. It is capable of do- time. The old sea line can be traced high up ng boiling, baking, roasting and broiling, and on the Swedish and Norwegian mountains. It can also be used, by the addition of suitable was the same in South America. If they went covers, for heating sad-irons and the like. The construction is about as simple as that of an thousands of years ago there were huge conordinary lamp, and its management nearly as tinents, the levels were going down, wherever casy. The mica illuminating arrangement, in-tended to give opportunity for watching the was rising, and wherever they had corals formflame, serves a double purpose, as it lights the ing their reefs the land was lowering. If they room as well. In constructing this stove es-pecial attention has been paid to securing a Liverpool they would find a submarine forest, perfect combustion, in order both to reduce with stumps of trees washed over by the tide, the consumption of oil to the smallest possible. The land there was sunk and the salt water is amount and to give a powerful heat for cooking washing the mud over the area, gradually fill-purposes. As a result of this the stove is ecoing up the places, and so coal would be formed nomical. Tubes are arranged so that the gas years ago. The same thing existed formerly, which may arise from the oil is at once con-ducted from the reservoir to the flame. To keep and the quality of the coals depended on the the oil reservoir, or tank, cool, and at an even kind of routine they were subjected to. With



"SUMMER COMFORT" OIL STOVE

it is too frequently overlooked. This stove, | great deal. In some places it was a dense blue which is shown double in the engraving, is also clay, in others a sandstone, and the beds thembroilers are made to go with the stove. The action by a marvelous and mysterious arrange-Pearl street, New York city.

The History of Coal.

In a recent lecture Prof. Williamson, of Owen's College, Manchester, England, gave the following popular account of the formation of coal: The professor said that during the early period of its formation the carboniferous measure was under the sea, and if they went to Edinburgh they would find the coal fields there to be of the same age as the limesites of magnificent and flourishing forests. If with respect to coal as they were at Edinburgh. to the bottom, and these navigators came to the

In superintending the work he found at Clifton some fossil trees standing on the coal, the roots coming down to the coal. The stem was not less than 12 ft. in circumference, with enormous roots. It was clear that these trees had grown where Mr. Hawkshaw found them, standing in the precise spot where the seeds were shed millions of years ago, shooting up and growing age after age. Consequently it was fully established that coal was made of various matters contributed by trees where it

put up single. Ovens, sad-iron heaters and selves broken and shattered by some tremendous manufacturers are F. Hildebraudt & Co., of 298 ment. If those strata had remained in horizontal layers they would have been far out of the reach of man, but by some mysterious power they are turned up and twisted and brought near to the surface. They were brought within reach because there had been wonderful agents at work which tore up the earth's crust. and there are no strata so ancient but had been brought to the surface at some point. Such had not resulted from any volcanic action, but from shrinkings and contractions which the earth's crust had undergone.

The earth cooled down and shrunk, so that fissures were made in the earth's crust, and it stones of Yorkshire and Derbyshire. There was a great blessing to all of them that it did. they had in place of these limestones a rich If those coal beds had swept along with a conseries of coal deposits, which were once the tinous sweep unbroken by faults no human machinery that was ever invented could have they went to France they would fird at St. kept the mines from being drowned out with Etienne that they were in the same position water. The faults enabled the coal strata to remain dry, and allowed the collier to work. They invariably found that beds of coal rested It was sometimes found as the coal is being on a rough, bluish-gray clay, which was generally known by the name of fire clay, for the deteriorated, and when worked away from the reason that it is the best material for making fault it improved. That he considered defire bricks of. That clay, upon which every pended on the nature of the material which seam of coal both in this country and America filled up the faults. The faults represented a rested, had evidently something to do with the mass of rocks that were cracked through. formation of the coal itself. The discovery There was a great fault running near to Bolton, of the association of the two was made by Sir one side of which was lifted 1000 ft. above the W. Logan, who further pointed out that in the other, and this could not have been done withfire clay there existed enormous quantities of out producing a mass of ground up material, very peculiar plants, known as stigmaria. and, therefore, if that mass which filled up the Then there were leaves to be found which had crack of the throw consisted of a porous matebeen turned into coal. We have discovered that leaves and wood can be converted into that leaves and wood can be converted into that came there was another proof that came the faults, as well as the roof, have had their The Romans found out the influence on the composition of the beauty of Whitby jet. Jet is another form of saw what had taken place-the vegetable mass, wood, which they would easily see by putting in the first instance, had a uniform composition, a piece of it under the microscope. Seams of but it gradually became altered. The changes coal vary in thickness, some of the lowest near took place atom by atom; a little gas was let Halifax being very thin. In America there were in, then a little more, and so on, the change seems 30 ft. in thickness, some by the side of going on during thousands, or it might be milariver. But how did the plant get there? lions, of years, so thoroughly permeating the Some of our navigators had noticed the fact whole mass that they could see how the operathat in calling in the Gulf of Mexico large tion had gone on through those years when the masses of vegetable matter, rafts of trees and more volatile gases escaped where the roof was branches, had been brought down by the Mis-brones. Whereas if everything was the reverse sissippi, washed away by floods from the banks of the river, and carried into mid-ocean. When composition of wood. They thus learned that these rafts became so thoroughly water logged the reason why coal had different qualities de-that they could float no longer down they went pended altogether upon how far the original gases had been retained by the coal, and how conclusion that that process was the history of far the more volatile of them had been lost and the formation of coal. But this explanation passed away entirely. So much for the qualidid not satisfy everybody. Some people, how- ties of the coal, and as to the tree of which ever, were of opinion that the explanation coal was formed. The forests were different to would be found in the history of our peat bogs. the forests of the present day. The forests of Some light was thrown on the matter in the to-day consisted of oak, ash, and so on, but making of the railway between Bolton and none of the trees that existed in the coal age Manchester, by Mr. Hawkshaw, the engineer. ever represented any of those trees. The trees In superintending the work he found at that produced the great bulk of the coal were

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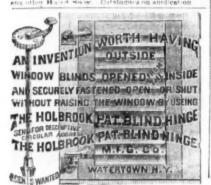
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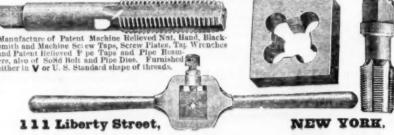


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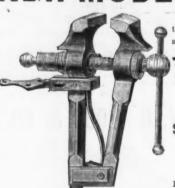
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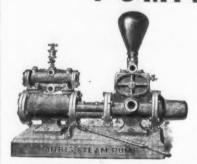
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to the working of some of the cable lines between Great Britain and India, with entirely satisfactory results. Like results have attended its employment on some of the French trans-European lines, and its use now promises to become universal. In the original system of telegraphy the signal is produced by a battery current, which is sent from the dispatching station, over the wire, to the receiving station, returning thence through the earth to its original battery, thus making a complete circuit. During this circuit the current passes through the recording instrument at the dispatching station, as well as through that at the receiving station, the operator producing his own signal on his own nstrument, as well as upon that which he has signaled. Of course, on account of this disturbance he cannot receive a message at the same time from the other end of the wire. To remedy this condition of the instrument, and leave it unaffected at sending station, enabling it to receive and record messages, was for many years a serious problem among electricians Great difficulty was found in accomplishing this on long land lines, and still more on submarine cables. On account of the cables being brought in contact with the earth by the water, there is an induced current formed which seriously retards the speed of the battery current. necessitating the use of recording instruments of greater sensitiveness than those which are used for land lines. The principle of the duplex telegraph is that if the battery current is divided into two equal parts, these may be conveyed around the recording instrument by two different wires in opposite directions, thus making two distinct circuits, one balf current signaling the recording instrument at the distant station, and the other, after balancing the needle at the sending station, being wasted. To properly balance the recording instrument at the dispatching station, the second half current must be of the same strength as the first. This uniformity is produced by the two circuits which they travel, being of the same re-sistance, because if the circuit to the left is of less resistance than that to the right, a greater quantity of electricity will flow to the left, thus unequally dividing the battery current and unbalancing the recording instrument. On land lines the resistance of the wire to the battery current can be ascertained without difficulty, and can be easily imitated on the artificial cir cuft. In submarine cables, however, there is the induction already spoken of, and the retarding capacity of the cables to contend against. Though each mile of length in any given cable presents some resistance, and also a certain retarding capacity, still these effects are not alike in any two cables, each having to be tested separately. The second circuit, the resistance of which for land lines is only necessary to be equal to that of the signaling wire, must, for the cables, be equal to it in re sistance as well as in capacity-two require ments difficult to accomplish. It is necessary that resistance and capacity should be equally distributed in both the cable and second circuit, any portion of the circuit being equal to a like portion of the cable. Various attempts have been made by electricians to overcome this difficulty by various combinations of condensers with resistance colls, but all of these have failed from want of uniformity in their qualities. Mr. J. Muirhead, Jr., however, has succeeded in obtaining the desired result. He formed his second circuit of sheets of paper, prepared with parafflue, having a piece of tiufoil wound around, to and fro, on one side, representing the resistance through which the second current is conducted; on the other side a sheet of tinfoil represents the covering of the wire to give the capacity. Of course a sufficient number of these sheets would represent the cable in its length, the non-signaling half of the current being equal to and discharged to the emission of free sulphureted hydrogen, under the same conditions as the signaling half, and to be objectionable as filling the atmos-In the practical use of this invention two phere with fine penetrating particles. Walpert, methods may be employed. The two half cur- of Kaiserslautern, however, affirms that though rents may be carried around the recording instrument in opposite directions, or may be con- the sulphur contained in the ore, yet under nected at their turning point by a Wheatstone ordinary circumstances the amount of moisture bridge on which the recording instrument is and carbonic acid in the air will not be suffi-One-half of the current flowing smoothly along the signaling wire to the re-cording instrument at the distant station, the other half at the same time running along the artificial circuit, will not disturb the equilibrium of the bridge nor affect the recording instrument placed upon it. The operator at the signaled station having a similar arrangement, sends along a half current from his end of the line, which meets and opposes that which is coming torward him. The flow through the signaling wire being impeded, and the resistance of the two circuits being no

longer equal, the balance of the first recording

instrument is disturbed in a degree corre-

sponding to the admission of the current from

the other end. A single wire will thus convey

two different signals, in opposite directions, at the same time, so that only one wire is neces-

be highly beneficial to all who have occasion to use the cable, as it will materially cheapen the rates. To the cable companies it will be of in-calculable benefit and of great profit. They will have fewer lines to attend to, and, in consequence, fewer expenses in maintaining a service in proportion to the requirements of the public.

The smiths at Ceylon use a

COMPOSITION AS A HONE

for sharpening knives and cutting instruments that is worth noticing. It is made of the capitia resig and of corundum. The corundum. in a state of impalpable powder, is mixed with the resin rendered liquid by heat, and well incorporated. The mixture is poured into a wooden mold, and its surface leveled and smoothed while it is bot, for when cold it is extremely hard. It is much valued by the natives, and preferred by them to the best of our hones.

Petroleum does not seem to be an excitement of recent date in the extreme East, since for hundreds of years the

NAPHTHA WELLS

of Bakou, in the Caucasus, have been worked by the natives, and the quantity underground appears to be unlimited. A well 81 ft. deep is shown to the visitor which was dug 200 years ago by the Persians when they were masters of the country. In summer the naphtha is thrown up in lets, some reaching 100 ft. above the ground, and then runs to waste in the absence of means to collect such large quantities of this oil. Mr. Churchill, the British Consul to Resht. Persia, reports that while at Bakou last year, on his way to his post, he visited the wells on the neighboring plateau of Balakhana. He says that in 1874 the tax of 25c. per pood (36 lbs.) of petroleum produced, brought the government 280,000 r., showing a produce of 1,200,000 poods of petroleum, and a consumption of three times that amount of naphtha. In that year upward of 180 manufactories were at work in the outskirts of Bakou, but, owing to the enormous competition of American petroleum, many of the smaller manufactories have been compelled to cease work. The two largest are at Surakh Khana, eight versts from Balakhana. This spot was chosen for economy of fuel, as gas issuing out of the surface is used in lieu of coal or naphtha. You have at Surakh Khana the wonderful sight of green fields and waving corp, in the midst of which the removal of a foot or two of earth will reveal a jet of gas that will raise an enormous blaze if set on fire. It is here that the Hindu monastery of fire worshippers is established, where a tongue of flame is perpetually kept up. But against the advantage of cheap fuel must be set the expense of transport from the naphtha wells. The average price of petroleum at Bakou is stated by the Consul at 1 r. 10c. per pood, and the cost of transport to Moscow at 57c. There is great room for economy in the transport of the raw material to the manufactories, which might be effected, as in America, by constructing a railway with suitable tanks, or by means of gravitation through an iron pipe; and some saving might also be obtained in the process of purifying the petroleum. It is only by such neans that the Bakou petroleum can compete with that of the United States. The naphtha makes a very good substitute for coal in steamers employed in the Caspian Sea.

The modification of slag, known on the Con-

" SLAG WOOL"

or "hair slag," is taking up the attention of engineers. An architect in Berne, Mr. Jahn, describes its physical condition as being that of spun glass. It consists of fine hollow tubes, frequently 40 centimeters long, filled with air. It is the property it possesses of holding a large quantity of air which makes it valuable as a non-conductor. As such it is not only adapted for use as lagging for steam pipes, but is of exceptional efficiency as a stuffing for soundproof walls and flooring. In this way it has been made use of for a couple of years in Zurich, and has been adopted by builders in Berne. It has been reproached with giving rise the silicate contains sulphur, in proportion to cient to cause the evolution of any perceptible quantity of deleterious gas. Qualities of slar will vary as they decline from the normal proportions of 56 parts silicic seid, 30 calcium, 14 alumina. The blast furnaces at Osnabruck and Zwickau were among the first to prepare the "Schlackenwolle," by sending the blast air or steam through the melted slag. It is now made in many places. That produced in Austrian works was lately the subject of a paper read before the Vienna Society of Arts by A. Groger, who pointed out not only the qualities already enumerated, but its incombustibility. A further use was indicated; it will absorb six times its own weight of water. and therefore seems as if it could be adapted to the manufacture of dynamite, or converted

to use as an anti-explosive.

Voss, Mitter & Co., of Berlin, are fitting a new METALLIC FIRE-PROOF CURTAIN

sary where two were formerly employed. This invention of Mr. Muirhead's is of great importo the theater in Dresden, now rebuilding after destruction by fire. It is of corrugated iron. tance on all marine lines, doing away with the enormous expense of laying new cables to meet Exposed to heat a brisk circulation of air is set the increasing use of this means of communiup in the sections of tubes formed by the cor cation with the old world. It doubles the carrugations, the heated particles ascending, and rying capacity of each cable, and is of the utcolder particles flowing in to supply their place. The latter keep down the temperature so conmost value to business men who have had heretofore to wait until the precedence of outward siderably that a sweating breaks out in the plate of which the curtain, or shutter, as it is, and homeward messages were arranged before strictly speaking, is composed. The shutter their messages were dispatched. It also does made for the Dresden theater is 40 feet high and away with the annoyance and inconvenience, both to the receiver and the company, of unin- 46 feet wide. The method of riveting the plates telligible cablegrams, which have very often to of which it is composed, and of raising and be sent back to be deciphered. It will, further, lowering it, are the subjects of patents.

Pawtucket, R. I.

ELIAS G. HELLER. PETER J. HELLER.

NEWARK, N.J.

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N.Y.

LEREBROG

GRO. E. HEILER. JOHN J. HELLER.

™ Horse Rasps

and Files.

John Rothery's

The American File Company have the exclusive right to use the Bernot process for cutting files. By this method all the advantages of band cutting are secured, together with an accuracy unattainable in hand work. They are the only manufacturers who employ machinery for testing files and steel.

Goods of all known manufacturers have been repeatedly tested, and interesting tables have been compiled showing the working qualities of fries made by different makers, and of files made from different steels, and with various shapes and angles of tooth. They have thus reduced the manufacture of files to an exactness and perfection with a uniformity of result, as they believe, never refore attained No file, foreign or domestic, that they have even tested, has equalled the performances of their own goods taken at random from their stock. Their machines are capable of the most delicate adjustment, and can produce the very finest work known to the trade. Special files made to order. Prominent file manufacturers are having their best goods from our works. Price lists and information furnished on application.

AMERICAN FILE CO., Pawtucket, R. I.

THE BEST IS THE CHEAPEST.

McCaffrey's Standard American Hand Cut Files and Rasps are warranted to

do more work than any other files and rasps in the market.



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ESTABLISHED 1848.

T. DRAPER & CO.

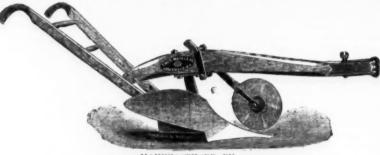


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Meikle's Steel Sod Plow.



THOMAS MEIKLE & CO.,

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GOLD MEDAL Non-Extensible Razor Belt.

PATENTED JULY 25, 1871.

RE-ISSUED MAY 13, 1873. and JUNE 9, 1874.

In this Strap toe liability of the leather to stretca and become loose and porous is prevented by the use of a patented non-extensible base, which supports the leather and secures

PERMANENT ELASTICITY.

We make this style with single rod, double rod, and wood frames, and intend that it shall, in quality compare favorably with our other well known brands.

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Black Diamond File Works



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SWEDISH and RUSSIAN

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FILES. Hand and Tempered by an CORPORATE MARA ROLLERS, TILTERS & Forged, Ground and Cut by Improved Process.

CAST, SHEAR & BLISTER STEEL

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Messrs. Russell & Erwin Mfg. Co., New York and Philadelphia.

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No. 95 Fulton Street, New York.

AGENTS for the American Screw Co.'s Machine Screws and Taps. SOLE AGENTS Thos. Turner & Co.'s, Files, Horse Rasps.

IMPORTERS OF STUBS' Files, Tools, Steel Wire.

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DEALERS IN Scroll Saw Machines, Bracket Saws, Wood and Patterns.

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all descriptions of Files made to order. Price List mailed on application.



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New Pattern Horse Rasps,

HAND-CUT FILES and RASPS,

Made from English Cast Steel. JOHN & WILLIAM ROTHERY,

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Hammer Pointed HORSE SHOE NAILS

READY FOR DRIVING. anufactured from the best of NOR WAY Iron, warranted to give entire satisfaction.

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and most simple, Durable and Perfect Jointer aide. In four sizes, jointing from 16 to 46 inches i length. In use from Mane to California, is sed by the largest stave and barrel manufacturers in the world. Will pay for itself in 90 days in savog of time and timber over any Saw Jointer ever sed. Send for circular to.

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Covert Harness Snap, Horse & Cattle Ties, Halter Chains, Post Chains, &c. Sold by all principal jobbers in General and Saddlery Hardware. Send for Hustrated Circular and Price List. Addres

HOLD BACK SNAP CO., Sole Manufacturers, Troy,; N. Y,



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Are Hammered Hot,

And the Finishing and Pointing are Done Cold,

Thus Imitating the Process of Making Nails by Hand.

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For Sale by all Leading Iron and Hardware Houses.

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Of all kinds.

Hatchets, Adzes, Grub Hoes, Mattocks and Picks.

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CLARK & CO.,

Original Inventors and Patentees

Noiseless Self-Coiling Revolving

STEEL SHUTTERS. FIRE AND BURGLAR PROOF.

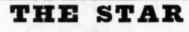
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Of various kinds. Clark's Shatters are the **Best** and **Cheapest** in the world. Are fitted to new Tribune Building, Lenox Library, belaware and Hudson Canal Co.'s Building, Transalantic Steamship Co.'s new Dock, American News Office, &c., Posey County Court, Onese, Mt. Vernon, Holt County Court, Oregon, Mo. Also to buildings in Boston, Cuncinnati, Detroit, Janesville, Wis., Baltimore, Canada, &c. Have been for years in daily use in every principal city throughout Europe, and are indersed by the **Leading Architects** of the World.

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Hardware dealers, wherever newspapers or letter are delivered by carriers, should have them in stock. Once shown they sell themselves.

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Manufacturers, No. 166 Fulton St., New York. Caution.—As certain parties are offering for sale a SPURIOUS PAINT, under an imitation name, purchasers will please see that our TRADE-MARK is on every package. None other genuins.

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SOLE AGENTS FOR Steel Wood Screws,

Also Brass, Round and Flat Head Blued Screws. COLUMBIA LOCK CO.,

RIM AND JAIL LOCKS AND KNOBS. Rim Locks, 4 in. Cam Fastening, \$1.66 per doz.; Mineral Knobs, \$1.00 per doz. Porcelsin Knobs, \$1.40 per doz. In lots of 10 doz., 10 per cent. off cash. Other sizes and descriptions of Locks at relatively low figures to the trade.

WM. BALDWIN'S CAST STEEL,

Each Bar warranted. 12%c. per lb. In 1000 lb, lots, %c, per lb. off.

Also Solid Cast Steel Hammers and Tools, C. S. Hatchets,

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B. & R. Marshall's C. S. Shovels, Spades & Scoops. Patent Solid Box Vises. WILEY'S PATENT OIL CABINETS

for holding Lubricating and Burning Oils, for Warehouse, Factory and

FLORENCE TACK COMPANY,

MANUFACTURERS OF Ship, Coil and Brake Chain. AND JOBBERS OF

HEAVY AND SHELF HARDWARE

At Manufacturers' Prices. J. Russell & Co, Cocoa Handle, Bolstered Knives & Forks,

Established 1854.

STEPHENS & CO.. 1867; Moscow, 1872; Vienna, 1873, and Highest Award and Medal at Centennial Exhi- Manufacturers of U. S. STANDARD BOXWODD and IVORY RULES. of wood, and have a large amount of ore



Also Exclusive Manufacturers of L. C. Stephen's Patent Combination Rule

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Burden's Horse Shoes, Perkin's Horse Shoes, Romer's Padlocks, American Screw Co.'s Screws,

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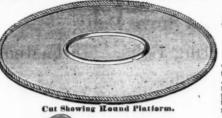


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No. 129, Fore Plane, 20 inches in length. 2% inch Cutter. \$2-25

ANSONIA CORRUGATED STOVE PLATFORM

Manufactured by the



Section Showing Edge.

Ansonia Brass & Copper Co. Office, 19 & 21 Cliff Street, NEW YORK,

The Ansonia Corrugated Stove Platform, with its heavy figured ogee border, is believed to be the bear Platform offered to the trade. As shown in the illustrated section herewith it requires no nailing to keep it in place or to prevent it from turning up at the edge; while the metal is of sufficient thickness to require very living.

no lining.

The low price, superior quality and fine finish of this Platform will be readily acknowledged.

LIST PRICES REDUCED.

DARLING, BROWN & SHARPE

Providence, R. I.

United States Standard Steel Rules, HARDENED CAST STEEL TRY SQUARES,

STANDARD WIRE GAUGES.

TOOLS FOR ACCURATE MEASUREMENTS.

New Illustrated Catalogue, issued March 1, sent per mail

INDUSTRIAL ITEMS.

MASSACHUSETTS.

The Lenox and Van Deusenville furnaces have a small stock of coal on hand, but it is doubtful when they will start to use it. None of the Massachusetts furnaces are cutting any wood preparatory to starting.

NEW YORK. Troy makes 200,000 iron bootjacks per year. PENNSYLVANIA.

At Providence, Luzerne county, near Scranton, Messrs. Spencer & Price are building a rolling mill to make merchant bar from scrap It will contain one heating furnace, one

trip hammer and one train of rolls.
Furnace No. 4, of the Crane Iron Company, at Catasauqua, has recently made 433 tons of iron. This furnace is 55x171/2 feet, and uses anthracite for fuel.

The Lackawanna Coal and Iron Company's large furnace at Scranton made 16,017 tons of Bessemer iron last year. The furnace is 23 feet bosh and 67 feet high. The fuel used is anthracite coal, and the ores a mixture from Crown Point, N. Y., and Franklin Furnace, N. J.

The stockholders of the Allentown Rolling Mill Company have under consideration the changing of their large rail mill into a steel rail manufactory, the outlay requiring an invest-ment of \$1,000,000. They claim that with steel rails at \$50 per ton no railroad company will use iron, and therefore the demand, at almost any price, will be limited.

The fires have been lighted at two furnaces of the Allentown Iron Company, and the blast was

put on last Friday or Saturday. Hartman's zinc mines, at Friedensville, were abandoned on Saturday.

The Lehigh Furnace, week before last, proluced 263 tons of iron.

Lowry, Eichelberger & Sons expect to run their furnace and forge at Barre Forge, Huntingdon county, to their fullest capacity the present year. They have chopped 10,000 cords mined.

All of the iron works at Harrisburg, with the exception of the Lochiel, are in operation.

The Harrisburg Car Co., which employ more labor than any other industrial establishment in Harrisburg, have been without orders for some two months past. It is stated, however, that they are about contracting for some work at satisfactory prices.

The stock of pig iron, both in makers' and onsumer's hands on the Lower Susquehanna, is small. The furnaces are making about twofifths of their usual product.

The demand for the Weimer blowing engine and suspended oven is increasing at his works, Lebanon. The machine department, the foundry and the blacksmithing shops are now busy with their full complement of hands.

No. 1 furnace of the Coleman heirs, at Cornwall, has been blown out to be remodeled, throwing a number of men out of employment. The other furnaces around Cornwall are working well and turning out large quantities of iron.

All the mills at Danville are idle except the

Danville Iron Works.

The Lebanon Manufacturing Company have Philadelphia. They have also received an order for a 12 horse-power engine for parties in Hagerstown. They have just shipped to Hagerstown a 16 horse, and a 112 horse-power engine to parties in Philadelphia. They have also large orders for corn shellers and other agricultural implements.

At the Reading Hardware Works about 400 hands are employed, who work up into various articles each day about 20 tons of No. 1 pig

The Carbondale Iron Works have more orders on hand than they can fill for some time.

The puddling mill of the Bethlehem Iron Company, which has been idle for some time past, is expected to start up this week, making

boiling iron for the market. The Roberts Iron Company, of Allentown, are shipping daily from twelve to fourteen car loads

of pig iron. PITTSBURGH AND VICINITY.

The Leechburgh Mill has finally been sold to Kirkpatrick, Owens & Co., for \$75,000. Mr. ormerly of the Matthias & Owens.

A shaft for the towboat Joseph B. Williams, the largest stern wheeler ever built in the United States, has just been completed at the Duquesne Forge. It is 34 feet 8 inches long. diameter of journals 16 inches, weight nearly 13 tons, of Low Moor and American scrap iron.

The Fulton Co. have orders for four bells. weighing respectively 3000, 1500, 1200 and 1000 lbs. They made one bell for China, and frequently have orders from South America. VIRGINIA.

There is considerable of a movement, solely for investment, in iron properties in this State. оню.

The Ohio Iron Company's Furnace, at Zanesville, went into blast on the 21st uit. This is the furnace that made 58,000 tons of iron on one hearth. She went out of blast last July and has received thorough and complete repairs, with some splendid improvements.

The Gaylord Mill, at Portsmouth, is going to be supplied with a 6 ton steam hammer, that will have a striking capacity of 30 tons. It is intended for working large piles, from 800 to 1500 pounds each.

Whitwell stoves, 14 by 30, are to be put up at each of the two furnaces at Ashland, which will both blow out shortly for this purpose and s complete renovation.

A 14 feet bosh furnace for Messrs. Moss & Marshall, of Sandusky, is to be built in the Straitsville region, to be ready for blast by September 1.

Scioto Furnace has blown out,

Messrs. P. P. Must & Co., of Springfield, are bout establishing a large works for the manufacture of door and other locks of new and im-

proved patterns.

The Malleable Iron Works, belonging to the Champion Mower and Reaper Company, at Springfield, are now employing 125 hands, and turning out about 100 tons malleable iron castings per month, all of which are used in the manufacture of Champion mowers and reapers. The Champion Works are turning out from their three factories at the rate of 125 machines per day. All told, there are 1500 hands employed at these works. The works consume annually in the manufacture of mowers and respers 12,000 tons of wrought and cast iron beside 1200 tons of malleable iron castings, and use about 540 tons of American steel in the manufacture of knives for the machines. This steel is manufactured by Park Bros., at Pittsburgh. The last year's consumption of this steel was some 700 tons.

Heaglen & Pease, manufacturers of brass goods at Dayton, have their works running full with a fair prospect of largely increased orders this year.

W. P. Callahan's machine shops, at Dayton, are running with a fair amount of work, and the proprietors seem to think that the prospects for orders during the year are good, and expect considerable increase of business.

The Eberhard Manufacturing Company, of Pittsburgh, Pa., have recently purchased the extensive building formerly occupied by the Printing Press Company, at Canton, where they are now erecting a commodious foundry for the manufacture of malleable castings, This company are now manufacturing a large line of saddlery hardware of new and improved patterns. They have now orders on their books which will take at least two months to fill. They expect to have the new works at Canton in operation in three or four weeks, and will employ about 200 hands. Their general office will still remain at Pittsburgh.

MISSOURI

The Jupiter Furnace, at St. Louis, will blow n in May, running on Bessemer, and hopes to make 90 tons a day. This is a 75x20 stonecoal furnace, and, though built in 1873, has never yet been in blast. The size is the same as the Lucy and Isabella No. 2, at Pittsburgh, and will furnish a good opportunity for comparing results and arriving at the relative cost in different parts of the West.

The Hamilton Furnace will resume operations in May. The Midland will also blow in in May, and the Ozark sometime this month.

It is reported that the Vulcan Iron Works, St. Louis, have orders for six months ahead. Harrison Wire Works, St. Louis, employ 20 men, and are running their whole works night and day. Laclede Rolling Mill, Choteau, Harrison &

Valle, is running full single turn. MICHIGAN.

Malleable iron is to be manufactured at the Flint Iron Works.

A narrow gauge railroad is to be built from Paw Paw to Lawrence

The Wyandotte Rolling Mill Company were partially reorganized on Saturday last by the election of the following officers: President, H. C. Hodges; vice-president, W. N. Carpenreceived orders to construct a 216 horse power ter; directors, Orrin W. Potter, of Chicago; and a 112 horse-power engine for parties in S. P. Burt, of New Bedford; D. L. Quirk, of Ypsilanti. We have learned of no other changes, but those noted indicate a more energetic policy for the future. - Wayne County Courier.

TENNESSEE.

The La Grange Furnace will blow in very oon, and also the Cumberland. The latter has still considerable metal on hand.

Some of our correspondents among the charcoal furnace proprietors in Tennessee report plenty of orders offering at slightly improved, but still unsatisfactory, prices.

The Tennessee Iron and Steel Company, Chattanooga, are prepared to manufacture about seven tons of finished merchant iron per day. They carry a good stock, well assorted, and run the mill to meet the demand.

The Roane Iron Company, Chattanooga, have started their mill again, after a stoppage of two weeks for repairs.

KENTUCKY.

The contract for tearing down and removing to the iron region the Gaylord (Newport) Furwas awarded last week

The Swift Iron and Steel Works are making 45 tons pig iron per day at their furnace, Newport, from Virginia ore, using three-fourths Connellsville coke and one-fourth coal from their mines at Steubenville, O. Their mill is running full, single turn, on boiler plates and on 40 lb. T rail for the Cincinnati and Eastern Narrow Gauge Railroad. The coal from the mines and the ore from Huntington, W. Va., are delivered at the furnace landing.

A 271/2 inch bituminous coal seam on Osenton's lands, 11/2 miles west of Grayson, Carter county, remarkable for its purity from sulphur and richness in carbon, has lately been tried on the engines of the E. K. R. R., giving good

satisfaction.

The Washington Furnace is to go into blast this week, making another trial on stonecoal; it will use all or most of it in coke. ILLINOIS.

The Belleville Nail Works are making 600 kegs of nails a day, running their nail machinery until 9 o'clock. They are 6000 kegs behind orders, or were before the late decline in nails.

Much success has attended the adoption of steam for moving street cars in Paris. Along the grandest boulevard in the city, and wind-ing through some of its busiest streets, turning ing through some of its busiest streets, turning sharp angles and elimbing and descending perceptible grades, the Merryweather engines draw crowded cars from the Arc de Triomphe to the Bistile, a distance of seven miles, at a speed of eight miles an hour, and nobody is hurt, and even the horses see it pass with contemptuous disregard. The engine is noiseless and smokeless. It has proved to be far more economical than horse-power, and a large additional number have been ordered,

RUSSELL & ERWIN MANUFACTURING COMPANY

Manufacturers of HARDWARE.

FACTORIES, - - - NEW BRITAIN, CONNECTICUT, U. S. A.

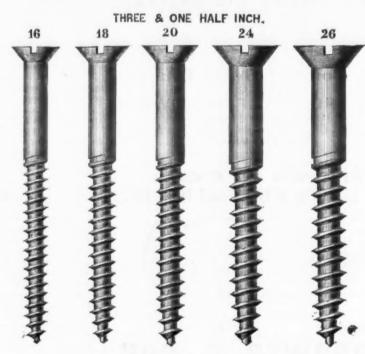
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WAREHOUSES: NEW YORK, 45 & 47 Chambers St.; PHILADELPHIA, 425 Market St.; SOUTHERN DEPARTMENT, BALTIMORE, MD., WM. H. COLE, Agent, 17 S. Charles St.

SCREWS.

We are prepared to furnish 6500 gross Flat Head Iron Screws per day, of a quality and finish unequaled.

All orders are filled promptly and shipped complete.



Our Screws are packed in our new Patent Paper Boxes, bearing our labels, on which are LARGE FIGURES denoting the size and number.

VOLUME 4, and will take the place of Volume 1, 1874. It will contain a complete list of all goods of our manufacture (except Bronze Hardware), consisting of DOOR LOCKS, KNOBS, ESCUTCHEONS, &c., PAD LOCKS, CABINET LOCKS, MISCELLANEOUS HARDWARE and SCREWS.

VOLUME 2 and appendixes to same contain a large and complete line of REAL BRONZE BUILDERS' HARDWARE, NICKEL PLATED, NICKEL & GOLD, ANTIQUE AND ILLUMINATED.

VOLUME 3, 1875, with additional pages, contains a full line of GENERAL HARD-WARE, which we offer as Manufacturers' Agents, or at Factory Prices, containing in part:

RUSSELL, BURDSALL & WARD'S Carriage, Tire, Plow and Stove Bolts.

JUDD & BLAKESLEE'S Wrought Brass Butts, Window Spring Bolts, Sash Fasteners, &c.

UNION MANUFACTURING CO.'S Drilled Cast Butts in all styles.

STANLEY WORKS' Wrought Butts, all kinds.

AMERICAN and UNION Spring Hinges, single and double acting.

TORREY'S, GEM, CHALLENGE and STAR Door Springs.

M. C. OGDEN'S Best Cast Steel Axes, Hatchets and Tools.

H. DISSTON & SONS' Superior Saws and Files.

THOS. JOWITT & SONS' and NICHOLSON FILE CO.'S Best Cast Steel Files.

O. AMES & SONS' Shovels, Spades, &c., &c. IOWA FARMING TOOLS.

GIRARD Wrenches. SPOFFORD'S Braces.

OWASCO and BAILEY'S Planes.

EAGLE Anvils and Vises. HOWARD Vises.

ANTHONY & CUSHMAN'S Cut Tacks, Brads, &c., &c.

AUSABLE, GLOBE, VULCAN, PUTNAM and CLINTON Horse Nails.

CHARTER OAK Lawn Mowers.

We also have a complete assortment of MECHANICS' TOOLS, CHISELS, DRAWING KNIVES, AUGERS, BITS, BORING MACHINES, &c.

Cutlery.

FRIEDMANN & LAUTERJUNG



ELECTRIC RAZORS,"

And the "ELECTRIC SHEARS." Nickel Plated Agents for the BENGALL RAZORS.

AMERICAN TABLE CUTLERY, BUTCHER KNIVES, &c. 91 Chambers and 73 Reade Sts., N. Y. 423 N. Fifth St., ST. LOUIS, MO.

MERIDEN CUTLERY CO. Received the HICHEST/CENTENNIAL PRIZE.



MANUFACTURE ALL KINDS OF TABLE CUTLERY.

Ive Makers of the "PATENT IVORY" or Celluloid Knife, the most durable WHITE HANDLE

The Oldest Manufacturers in America. Original Makers of the HARD RUBBER HANDLE,

call for "Trade Mark" "MERIDES CUTLERY CO." on the blade, warranted and good by all Dealers Mark" MERIDEN CUTLERY CO." on the blade. warranted and sold by MERIDEN CUTLERY CO. 49 Chambers Street, New York.



THE MILLER BROTHERS CUTLERY CO.,

PATENT FINE PEN & POCKET CUTLERY

WEST MERIDEN, CONN.

conly Knives made that are put together in such a manner that there is no strain on the cover frail part of the knife. We warrant our knives equal in cutting qualities and workmanship to any and are acknowledged by English makers as the Best American Knife. We also make NICKEL & SILVER PLATED POCKET KNIVES

which will not rust or become discolored when used as a Fruit Knife, and their cutting qualities are equal to any other knife. Orders filled from the factory, and in New York by Messrs. J. Clark Wilson & Co., No. 81 Beckman Street (who have a full stock of all patterns always on hand), and also by Messrs. G. 13. Walbridge & Co., No. 99 Chambers Street.

NAUGATUCK CUTLERY CO., Manufacturers of FINE PEN & POCKET CUTLERY.
BE BROS., Sole Agents, 89 Chambers and 71 Reade Str., N. Y.

Cutlery.

ESTABLISHED 1852. NEW YORK KNIFE CO.

MANUFACTURERS OF SUPERIOR

fable &Pocket Cutlery,

WARRANTED TO BE MADE OF THE BEST MATERIAL.

WALKILL RIVER WORKS,

Walden, Orange Co., New York. THOS. J. BRADLEY, President.



Young's Patent Folding Scissors.



de of the very best steel, nickel (ted that they can be readily e pocket without injury to the in will be sent by mall, to the of the retail price, namely:

MARX BROS., Proprietors, 430 Broadway.

AMERICAN PEN AND POCKET KNIVES,

Aaron Burkinshaw. AB MASSACHUSETTS My Blades are forged from the best Cast Steel, and warranted. To me was awarded the Gold Medal of he Connected State Agricultural Society; also a size, i and Dinjoma from the Mass Mechanics Ast's Sept., 198.

AMERICAN SHEAR CO.

Pen and Pocket Cutlery Shears, Scissors and Pruning Shears,

HOTCHKISSVILLE, CONN. m, 298 Broadway, New York, with Landers, Frany & Clare.

HALL, ELTON & CO.,

Electro Plated Ware, German Silver and Britannia Spoons.

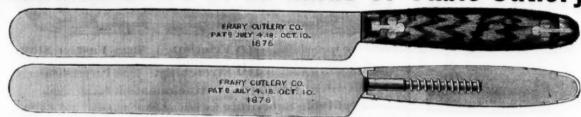


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THE FRARY CUTLERY COMPANY,

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The above Illustrations represent their New Patent Screw Tang Lock Fast Solid Handle Knife.

There is no question but that a solid handle Knife is much more preferable than a scale tang. The great objection to their use hitherto is, that no solid wood handle has been placed on the market with the handle properly secured—no handle put on with cement will stand the wear and tear of every day usage. The cement will expend and contract with the action of heat and cold, and become loose, crack and come off. causing great prejudice against their use. This objection is overcome in our patent screw tang. A wood screw is weided to the tang of the Knife or Fors, and screwed firmly and securely in the handle and looked there by the bolster, making a very strong furnish the patent handle nearly as low as the scale tang. We are prepared to furnish this line of goods, together with the scale tang and iron handle, very promptly, and very respectfully invite the attention of the trade.

PEN AND POCKET CUTLERY.

All blades forged from the best English Cast Steel, and Warranted. Each knife i made in the most substantial and compact manner, all articles used being of the best quality. All blades stamped Owen & Campbell, Philadelphia.

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And of

Ball's Pat. Solid Steel Sheep Shears.



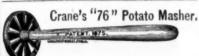
CARSON'S PATENT KITCHEN SINK. "The Kitchen Cleanliness pays

Eink heads the Dividends list by which in Health. people violate universal Economy is Sanitary Law," the royal G. E. Waring, Jr. Wealth.

The above Cut represents the Carson Sink, an Article which combines Two very important features in Domestic Economy, It prevents the pipe from choking and at the same time furnishes grease enough to make soap for the Family and is perfectly oderless.

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Smooth Back Scoops.

There is a universal complaint among the sers of scoops for heavy work, especially in shoveling coal on locomotives, that the scoops never wear out but give out through faults in onstruction, mainly in the method of attaching the back strap to the blade of the shovel. In scoops, as usually manufactured, the blade is first cut to required size, and a V shaped piece is then cut from the blanks at a point corresponding to the attachment of the straps, so that when the blank is submitted to the diesit may readily assume the desired shape. Finally the straps are riveted to the scoop, the point of the back strap being forward of the curve, and the rivet which secures the point of the straps, as well as the point of the back strap itself, being in the line of wear. The head of the rivet soon wears off, and the point of the back strap is constantly catching, and it is not long before it is torn from the blade. This, of

course, renders the scoop useless.

To remedy this and other defects, Messrs. Hussey, Binns & Co., of Pittsburgh, Pa., have invented a smooth back scoop, which we illustrate below. The construction will be seen at a glance; the blade and back strap are one piece, rolled from a single ingot of cast steel. The



HUSSEY, BINNS & CO.'S SMOOTH BACK SCOOPS

rivets by which the front strap is attached to the blade are all above the line of wear, so that there are no rivets nor projecting points to catch. In the ordinary scoop the V which is cut out, but covered by the straps, weakens the scoop. In this scoop this is avoided, and the whole of the metal remains to strengthen the scoop in its weakest point. Scoops are very hable to crack across the bowl on a line with the point of the straps; to guard against this every blade is tapered so as to increase in thickness from point to socket. By this means the metal is made heaviest where the strain is most severe, the strength of the scoop is nearly or quite doubled, its weight is not increased, while on account of its tapering lines, and there being no back strap or rivet in the line of wear, the force consumed in thrust of blade is little more than one-half of what it would be otherwise, and, as a result, the scoop will last much longer. Scoops of this make have been in constant use on locomotives for five months, where the life of an ordinary scoop was scarcely two months, and yet show but little wear. The processes and methods of manufacture are original, and the patents are owned by Mesurs. Hussey, Binns

New Patents.

We take the following abstract of new patents, recently issued, from the official record: FENCE.

To J. Morton, Thornville, Mich .- Dec. 19 .-The fence composed of the posts P, the bar B, fastened to the tops of said posts, the crossbar supports C, fastened to the bottom of said



posts, the oblique braces b b', and the longitudinal wires interlooped with, and attached to, the braces b

185,386,-Sad Iron Grinder.-J. F. Bless, Newark, N. J.-Dec. 19, 1876.

A holding wheel, mounted on a shaft at right angles to grindstone shaft, has a reciprocating and rotary motion imparted by the driving power which turns the grindstone. Irons being ground may be inserted and removed without stopping the machine.

185,446 .- Metallic Car Platform .- B. J. La Mothe, New York, N. Y.-Dec. 19, 1876.

185,628.—Combined Handle Plate and Escutcheon for Doors .- J. Collins, Darlington, N. J .-Dec. 26, 1876.

The following design was patented during the week ending Dec. 19, 1876

9672 .- Railings .- William Tweeddale, Brooklyn N. Y., assignor to North American Iron Works. Application filed November 25, 1876. -Term of patent 14 years,

AMERICAN BOLT & NUT WORKS. Cincinnati.

Anchor Iron & Steel Works, Newport, Ky.

CINCINNATI, O.

Bar Iron,

Carriage Bolts,

Plow Bolts.

Sheet Iron.

Tire Bolts,

Hot Pressed Nuts,

Horse Shoe Iron.

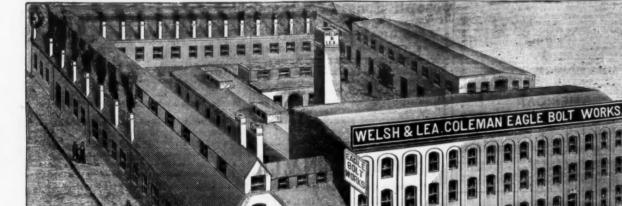
Machine Bolts.

Washers.

BRIDGE AND RAILROAD WORK A SPECIALTY.

Clark's Patent Concave Carriage Bolt. MACHINE BOLTS,

WORKS.





THE IMPROVED

In Competition with the World, at Philadelphia, 1876.

TWO FIRST MEDALS, and TWO DIPLOMAS OF MERIT

The following are the points that the Judges officially announce as the basis of their award of the highest honors to the Howe Scales:

1st. For their Protected Bearings (the Howe is the only Scale with protected bearings), which makes the Scale DURABLY ACCURATE.

For their Strength.
For their Simplicity.
For their Simplicity.
For their simplicity.
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For their various original improvements and adaptations (which being patented are exclusively possessed by the HOWE). The Improved Howe Scales

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TURNED MACHINE SCREWS.



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FORT PLAIN SPRING AND AXLE WORKS.



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Manufacture the Largest Variety of Forged Carriage Irons of Best Material and Workmanship.

PRICES LOW FOR QUALITY OF WORK FURNISHED.

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Double Burner Fairy Queen.



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THE BEST ADJUSTABLE HOLLOW AUCER MADE.

Every machine is tested by actual work, and will easily make the whole range of work claimed. The Knives being sharpened and adjusted before leaving the factory, gives to the mechanic a tool ready for immediate use. The cut is for brace use; the size larger is used with a crank. For sale by

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Iron Pumps Reamed & Re-Chambered. Also, Patent Pressed Pump Leathers, Galvanizet Iron Hanks, Oars, Mast Hoops, Hanks, Belayin; Pins, Hand Pumps, cc., and every article appertaining to the trade, of the best material. General dealer in Lignumvitæ

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Carriage & Wagon AXLES,

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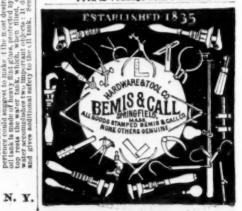
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Lag Screws, Tap Bolts, Set Screws, Bolt Ends, Turn Buckles, SAMUEL HALL'S SON,

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> IRON GIMLET-POINTED WOOD SCREWS.

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Penfield Block Works,

The Iron Age.

New York, Thursday, April 5, 1877.

- 14	
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20 Fifth Avenue, Pittsburgh.

JOS. D. WEEKS, Manager and Associate Editor

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220 South Fourth Street.

THOS. HOBSON, Manager

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AUSTRALIAN AGENCY.

The American Hardware Company are our agents for Australia. They will exhibit files of The Iron Age in the American Building of the International Exhibition, at Sidney, N. 8. W., where subscriptions will be received. After the close of the Exhibition, the files may be examined at, and orders for subscription directed to, their office in Melbourne. Sample copies will be mattled by them, free of charge, to any firm enraged in the trade4 we represent in Australia, Tasmania and New Zealand.

City subscribers will confer a favor upon the Publisher by reporting at this office any delinquency on 'he part of carriers in delivering The Iron Age; also, the loss of any papers for which the carriers are responsible. Our carriers are instructed to activer papers only to persons authorized to receive them, and not to throw them in hall ways or upon staters; and it is our desire and intention to enforce this rule in every justance.

REMOVAL.

The office of The Iron Age will be removed May 1st, 1877, to No. 83 Reade street, southeast corner of Church street.

CONTENTS.

First Page. - The Sable Rolling Mill and Nath Factory, Pittsburgh, Pa. The Power of Credit. Third Page .- Modern War Ships, Setting Planer. Baking Japans,

Fifth Page .- "Summer Comfort" Oil Stove The History of Coal.

Seventh Page -Scientific and Technical Notes

Ninth Page. - Industrial Items Eleventh Page.-Smooth Back Scoops. New

Patents. Fourteenth Page .- The Export of American Manufactures to Europe. The Effect of Low Prices on the Quality of Iron. The Locomotive Engineers. The War Cloud in the East. The Telephone. Twentieth Page. - Trade Report. Mining

Twenty-first Page .- British Iron Market Iron. Metals. Coal. Exports. Imports, Old Metals, Paper Stock, &c. Philadelphia.

Twenty-second Page.-Philadelphia.-(Con. cluded.) Pittsburgh. Boston. St. Louis. Louis. ville, Cincinnati, Chattanooga, Richmond, Balti nore. Cleveland. Foreign. Our English Letter.

Twenty-Third Page.—Our English Letter.— (Concluded.) Hardware at the Centennial,

Twenty-seventh Page.—The Iron Age Directory.

of flardware and Metals.

Thirty-first Page.—New York Wholesale Prices - (Concluded).

Thirty-fifth Page.-Philadelphia, Buffalo, Do troit and Pittsburgh Hardware and Metal Prices. Thirty-seventh Page.—Cinciunati, Boston, St. Louis Hardware and Metal Prices,

to Europe.

Our export of domestic manufactures to Europe has gradually assumed quite respectable proportions, and the tariff modifications in Germany hold out increased opportunities, of which our manufacturers will not hesitate to avail themselves. Since the commencement of the in the raw state, i. e., in pigs, bars and pean states will soon introduce similar the use of wood-working machinery. changes in their tariff policy. In Holland the usual agricultural implements are also exempt from duty; the more complicated agricultural machines pay but 1 per cent. duty. In Switzerland rails and sheet iron pay but 28 centimes duty per English cwt. Machinery pays 2 francs per cwt. A locomotive of 20 tons, worth, say, about 600 francs. In Norway all iron in a raw state is duty free. Portugal exacts a duty clothes horses, mangles, &c., &c. of but 55 centimes per English cwt. on all agricultural machinery. There is lowered or abolished on various articles in the metal line. Thus, the present duty on needles is between 1 and 2 francs per kilo., which is deemed too high. Pins, steel and gold pens, as well as fishing hooks, also pay a comparatively high duty.

The following details will show whither during the past fiscal year the various articles of most interest to our readers have gone: Agricultural Implements

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tion, it is fair to presume that a goodly portion of the implements nominally taken by her were re-exported to the Continent: Railroad Cars. Great Britain

DWCdca man	4 210					. workers
						\$90,677
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Germany Great Brita						\$94,422
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should say, capable of great extension.

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seems bound, from the superior quality of our copper, to become still more important in the immediate future.

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other side.

	Iron	and its	Manufactures.	
Belgium				\$43,00
France			************	53,31
Germany	*****	** *****	************	677,97
Great Britan	1	*******	******* ********	1,139.50
Russia				211,05
				\$2,205,69

This shows that even before the duty thus offered to create a demand modifications Germany was our next best

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This large amount gone to Turkey must have resulted from the shipment of war

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Russia						,	,											*				,								5,90
																														\$8.245.85

The amount gone to Belgium has been mainly in transit to Germany, we presume. Our leather is becoming so popular, even as far as Pesth (Hungary), that there is an expansion in prospect very nearly unlimited.

We have	ρ	1		t.i	1	6	ă		ì	0	1	1	ì	ıı		1	1	11	1		1	1	200	n				Δ	,018,	
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Thirtieth Page. - New York Wholesale Prices leather belting has a great future in Europe. Sewing Machines.

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France.				,	*	×		. ,		*		×	,	×	٠,		*	,		*	à			57,23
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The Export of American Manufactures decent amount. The shipments to Great at an actual loss-that is, if the iron sold since no road is safe whose engineers be Britain may have been in part for the East.

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than we had supposed, and certainly deserves looking after. With our superior woods, good taste and wood-working mapresent year Germany has abolished the chinery, we ought to be able to do a large duty on pig iron, malleable iron and steel furniture trade with Europe. They take our walnut, whitewood, and a dozen other ingots. This also applies to tools of cer- kinds in enormous quantities, thus showtain classes and to locomotives. An im- ing that they cannot do without them. On pression prevails that several other Euro- the continent they are quite backward in

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Netherlands																					15	.7
Sweden and No	OFW	ay	٢.					0	0 1				b	b	0 1	 b	. 1				11	,1
Sweden and No	orw	ay	٢.					0	0 1				0	b	0 1	 5	. 1		_	-	122	

Our foreign trade in washing machines 50,000 francs, consequently pays a duty of portant one, if we will but energetically cultivate the trade; the same relates to

Viewed as a whole, the outlook for our export trade is encouraging, considering a great deal of agitation in France the facilities of intercourse and credit be made. You have forced cheap prices of such struggles is in the end to break on the occasion of the expiration of which we possess in our dealings with several treaties of commerce, and the Europe. In the order of importance, our class maker asked 1 90c. for his iron, and the Brotherhood of Locomotive Engineers probability is that the duty will be goods have been distributed among the

various c	count	ries as follows:	
Great Britai	in	***************	\$11,687,583
Germany			4,618,898
Turkey			1,575,814
			1,349,060
Russia	*****	*********** * * * * * * * * * * * * * *	616,791
Netherlands			371,050
Sweden and	Norw	ay	76,621
Portugal			69,028
Austria			. 24,823
			22,488,614

Italy affords food for reflection. The have not used a pound of pig iron for a duties imposed by these countries are, on the whole, no higher than in France, while industrial development is comparatively backward. Perhaps our lack of trade with those countries is due to neglect on the part of our merchants and manufacturers; more likely the indifference to luxury and refinement among the lower and middle classes in those countries causes them to dispense with many of our articles, while our small exports thither may have gone there in transit via Liverpool, Londor, Marseilles and Ham-

England, it will be noticed, took more than all the other countries combined. Germany is becoming so important that we cannot study her wants too closely. Turkey, of course, principally took arms, munitions, &c. With France, under lower duties, we shall eventually do a very large business in our manufactures. Belgium has been credited with such a large amount, as the direct steamship communication with Antwerp has stimulated a large transit trade that way.

foreign trade as an outlet for the products of our manufacturing capacity, the Paris Exposition of 1878 offers opportunities for extending our foreign connection which should not be disregarded by our manufacturers. In addition to exhibiting such goods as may be adapted to the European Our superiority in this branch, it will be market, as many as possible of our manuseen, has opened us quite a market on the facturers should go or send representatives.

It is a clear proposition that no mill can, for any great length of time, sell iron for less than cost. There are circumstances in which it may be wise and prudent to do this for awhile. It is expensive to build up a trade, and if it be once lost, even for a short time, it is not easily regained, and then only at a considerable expense of time and money. The expenses of an idle mill are considerable, and oftentimes the loss in running is less than the expense in idleness. In addition, when a mill is idle for any considerable time, the old workmen accustomed to the mill become scattered, and it is no easy task to teach a new set and get them "handy" with the rolls and furnaces. These reasons, and many others, must be taken into account in deciding the question of running or not, and sult may be an important saving.

on common bar.

no puddling, and the latter can be bought | the policy of the Brotherhood. from \$2 to \$6 per ton under good pig. This will show how cheaper irons are made The absence on the list of Spain and We know of mills in this country that year, and we know others that only use it shall be made of first-class all ore pig, mean, of course, any mill within a reasonuntil 2 and 2 make 3.

Just here the question arises, Can a to be more and more so. There is one way at its price.

The Locomotive Engineers.

The general manager of the Philadelphia and Reading Railroad has sent the follow- it did before-the issue depending upon ing "iron-clad" circular to each of the locomotive engineers in the employ of the

goods we want to export, by bringing them to the notice of consumers, as well as of dealers.

The Effect of Low Prices on the Quality of Iron.

The treatment to create a demand for the demand for the good will be called upon to the company anyone who is a member of that organization. If you are in such membership, you will be called upon in a day or two to decide whether you desire to remain in the comployment of the company by complying with the regulation requiring you to withdraw from the association referred to. It is not the desired the company to the company to the proposed of the association referred to. It is not the desire of the company to deprive its employes of any of the beneficial or life insurance features of the Society of the Brotherhood of Locomotive Ecgineers without offering in their stead greater benefits of a similar character, and it is therefore proposed by the company to establish and endow a life and accident insurance fund, out of which all engineers, upon payment of a monthly sum less than previously end will reout of which all engineers, upon payment of a monthly sum less than previously paid, will receive in case of accident or death greater benefits than those heretofore derived from the Brotherhood of Locomotive Engineers. Upon being informed of your desire to continue in the employment of the company the undersigned will be pleased to give you any information you may desire as to the details of the beneficial fund, and to discuss with you directly any question involving your relations with the any question involving your relations with the company. Respectfully yours, J. E. WOOTTEN, General Manager.

excitement among the employes, and on the 1st it was supposed that a general strike was probable. A secret meeting hood apparently did all that was in their they go far in determining the wisdom of power to control the engineers of the road that it will not require the operators to be running at an apparent loss, so far as relates and to prevent them from leaving the so-skilled in the present Morse system. For to the cost of the iron, though the net re- ciety. When the test came, however, it ap- newspaper work its possibilities seem very But after all allowances are made, we do company's service and withdraw from the be put in direct communication with meet-1.775 not hesitate to say that many rolling mills Brotherhood. What the company asks of ings, lectures and concerts without the Germany, it will be observed, took a very are selling some portion of their product the men is eminently just and proper, necessity of having a reporter upon the

is good, honest made iron. The discus- long to an association which has such vast sion in our columns for the past few weeks power and abuses it in so reckless a on the cost of making merchant iron fashion. It is useless to point to the proves this, and any well-informed manu- good which the association has accomfacturer, or buyer even, who will stop to plished in the past; the evil which This item is much more insignificant think, knows that good iron cannot be it has shown itself able and willing to permade at any such rates as those at which it petrate is so great that the whole comis quoted. As we have already stated, in munity is threatened. The company in some cases the loss on some grades of iron this case propose to give the men all the is made up on specialties, but this advan- benefits which they would lose in leaving tage is being thrown away, and the "cut" the society, so that, practically, all the enon specialties is, in many cases, as great as gineer surrenders in making the change is the power for mischief which, as a mem-But all iron sold at these low rates ber of the old society, he possessed. Many is not good, honest made iron; in fact, but persons suppose, when looking at the little of it is, and whoever has deceived him- power of the trade unions and trade soself into the belief that he has bought good cieties in this and other countries, that iron at these low rates is not wise. It is their destruction is impossible, and that the useless to disguise these facts, or cover them community must always be burdened and up, of to try to wheedle oneself into the taxed with them. We do not believe this. belief that though my neighbor's product As the evils of the societies are better may be old rail or cinder iron, mine is good known, as their outrages increase, as their honest puddled iron. If you have bought oppression of the individual is more and wringers ought to become a most im- iron at the very low rates that have been strongly felt, the public will begin to realruling, you may conclude, a priori, that it ize that its own safety is endangered is poor stuff, and you have nobody but by the continuance of these unions. yourself to blame. You have insisted on and then we may expect the repetition of buying your iron at a price below what such struggles as that against the Mollie you were well convinced good iron could Magunes in the coal regions. The result and you have got cheap iron. If a first- down the associations, and in the case of any mill, no matter what its reputation, the breaking up of the organization can would take 1.80c., it got the order, unless only be a question of time. The plan some other mill went to 1.75c. The only adopted by the Reading Railroad Company way it is possible to cheapen the cost in in dealing with this problem is more than many sections is by using inferior material just-it is generous; and in accepting the that is, old rails and cinder pig. The proposition the men will evince a good former can be bought at, say, \$22, and need sense which has not thus far characterized

The War Cloud in the East.

It is rather difficult, even now, to tell what is the net result of the diplomacy which just enough to make tops and bottoms for has been at work for some months past to the piles. There is no way to get good find an amicable solution of the Eastern iron but to pay for it. We question if question-or, at least, to avert the immedithere is a mill to-day that will take a large ate danger of war between Russia and order for bars at 1.80c. and guarantee that Turkey. The protocol which has been signed by six of the great powers, is a and say they can clear themselves. We document which seems to admit of several interpretations, and it is still quite uncerable distance of a market. It can't be done tain whether the issue will be peace or war. Russia's agreement to demobilize her army is contingent upon the action of Turkey in mill that has had a reputation for making doing certain things which may or may a first-class iron afford to make cheap iron ? not meet the approval of the Porte. In Though it may be true that buyers who the event of Turkey's acceptance of the are willing to pay only these low prices conditions, Russia may be understood as should get only a low grade of iron, will agreeing to accept peace; but it is a natnot the result be injurious to the mills? ural inference that, should Turkey object The blame will all be thrown upon the or neglect to comply fully with these conmanufacturer, when he should justly carry ditions, the Czar will consider himself enbut part. That this is the result we have tirely unhampered by any obligations to the best evidence, and it will continue other powers to refrain from taking such action toward Turkey as he may see fit. out of this, and that is to make a low grade In either event his pacific promises do not of iron, and openly state that it is made out count for much, and it is the opinion of of old rails and cinder pig, and sell it at a thoughtful foreign critics of the situation In view of the growing importance of corresponding price, and sell honest iron that nothing in the protocol is likely to hinder Russia from adopting a vigorous and aggressive policy for the coercion of Turkey. In other words, diplomacy has failed to quiet the apprehensions of war, and the matter stands now pretty much as the pleasure of Russia. As it is in the highest degree improbable that the condifacturers should go or send representatives.

The good impression created by the Centennial as regards the variety and excellence of American manufactures, has opened the way for our trade and will make the American department of the Paris Exhibition a center of attraction. We must not fail to seize the opportunity thus offered to create a demand for the goods we want to export, by bringing them. tions which Russia imposes as the terms with benefit to the world, our interests will best be promoted by an uninterrupted continuance of peace.

The Telephone. Public interest in the transmission of

sound by telegraph has been greatly excited recently by the performances of the telephone in Boston, and during the present week in this city. The sound in the first instance was transmitted between Boston and Lynn, and in the latter case from Philadelphia to New York. The instrument invented by Professor Bell transmits the sound of the human voice, of instruments, &c., while that of Professor Gray, which was exhibited in New York, is limited to music entirely, and has a range of but two octaves. The value of this latter instrument seems at least to be problemat-Naturally this circular produced great ical, except as a means for duplex telegraphing of the most extensive kind. Professor Bell's apparatus seems to promise great things for the future in the way of was held, and the officers of the Brother- giving a method of telegraphic communication which shall be of such a character pears that the men preferred to remain in the great, since the office of publication may

spot. In many instances this would save a vast amount of time and labor. For private lines, the value of such a system over any other, provided the instruments can be made so as not to require delicate adjustment and to work without interruption, will be very great. The difficulties standing in the way of such a result seem to be merely mechanical, and it does not seem probable that they will long prevent the general introduction of the telephone.

Special Notices.

IRON RIVETS.

Seventy Five Hundred Thousand Assorted

BLACK AND TINNED RIVETS

IN STOCK, FOR SALE AT Rivet factory and Satisfactory

Prices.

SARGENT & CO., No. 37 Chambers Street.

NEW YORK, April 2, 1877.

NOTICE

To Mining Companies and Manufacturers of Machinery in General.

of Machinery in General.

I possess the facilities for the manufacturing of small Iron and Steel Forgings, and an extensive practical knowledge of the making of the same, and tools and machines for. e manufacture of Bridle Bits, Bolts, Turn Buckles, &c., including two Olivers, with a large assortment of Tools; one Bolt-Cutting Machine, will sverage 3000 bolts per day; one double Nut Tapper and Pointer; one Blover for 8 fres; one hand Cutting Machine; one Screw Press; Anvils, Vises and other Tools, compising in all the value of \$2500.

I thoroughly understand the making of all kinds of small tools and machinery in general. Steel working a specialty. I would place at the disposal of a manufacturer my aforesald working facilities for work that will steadily employ myself and help, or would contract for the manufacture of small forgings at reasonable rates. ALFRED HALL, P. O. Box 96, Sing Sing, N. Y.

for the manufacture of small forg-ble rates. ALFRED HALL, P. O. Box 96, Sing Sing, N. Y.

Stove Foundry.

A Stove Foundry for sale, favorably located in the Valley of the Mississippi. Has a good and increasing trade, of many years' standing, and has always done a profitable business. This is an excellent opportunity for an Evstern toundry with spare capital to start a Western branch. For particulars address STOVE FOUNDRY.

Office of The Iron Age, 10 Warren St., N. Y.

WANTED.—A first-class business man famil-iar with machinery and manufacturing, capa-ble of handling large bodies of men, desires a respon-sible position. References satisfactory. Address, IRON AND STEEL, Care of P. O. Box 813, Bridgeport, Conn.

DISCOUNT LISTS.

Dayton & Lamberson, 97 Chambers St., N. Y.

Wanted,

A Number Five Blake Crusher. Address, stating price, condition and place on railroad where delivery will be made,

Midland Blast Furnace Company,

Midland, Crawford Co., Mo.

Dissolution of Co-partnership.

The Co-partnership heretofore existing between Charles J. Field and James G. Hardie, trading as Field & Hardie, is dissolved this day, by mutual onsent. Either of the above will sign in liquidation.
All persons having claims against the late firm, will present the same without delay, and those in-debted will please make payment.

JAMES G. HARDIE.

CHARLES J. FIELD.

PHILADELPHIA, MARCH 31st, 1877.

NOTICE.

The undersigned begs to inform his friends, and the many patrons of the late firm, that he will continue the business at No. 633 Market Street, where he will always have a carefully selected stock of Hardware and Tools, for Builders, Machinists, Railroads, &c. CHARLES J. FIELD.

PHILADELPHIA, APRIL 1st, 1877.

Wanted.

An engagement by a therough and practical En-neer to superintend or construct Machinery, or an engagement by a therough and practical En-gineer to superintend or construct Machinery, or would fill the position of Engineer and Janutor of public building. Has had over twenty years' ex-perience, and can supply abundant reference as to ability and character.

Office of The Iron Age, 10 Warren St., N. Y.

Wanted.

A young man who has a thorough practical knowledge of the Manufacturing of Pig Iron (Charcool, Coke and Anthractic), is open for engagement as Superintendent or Manager. Good references. Address PIG IRON.
Office of The Iron Age, 10 Warren St., N. Y.

WANTED.

An established Hardware Business in some thriving town in Ohio, Michigan or Indiana—Indiana preferable. Address HARDWARE, Box 1244, Elkhart, Ind.

FOR SALE.—A Hydraulic Press of about 600 tons. Piston, 12 in.; Platform, 24x38 in.; double acting pumps, all complete.

B. F. W., Box 3841, New York P. O.

NOTICE.

PHILADELPHIA, April 2, 1877. On and after April 30th the Shipping Agency of The Pennsylvania Warehousing and Safe Deposit Co., at Perth Amboy, New Jersey, "OUSATONIC WATER CO.," will be discontinued.

B. K. JAMISON, Vice President.

Special Notices.

Second-Hand & New Ramsey's Car Truck Machine Tools.

The following machine tools, new and second hand, ade by the New York Steam Engine Co., for sale

The fe-lowing machine tools, new and second hand, made by the New York Steam Engine Co., for sale very low.

NEW TOOLS (N. Y. S. E. Co.'s make):

One Engine Lathe, 14 in. swing, 9 ft. bed; four Engine Lathes, 20 in. swing, 8 ft. bed; one Engine Lathe, 20 in. swing, 8 ft. bed; one Engine Lathe, 23 in. swing, 15 ft bed; three Iron Planers, 22 in. wide, planes 45 ft. long; one Iron Planer, 25 in. wide, planes 46 ft. long; one Iron Planer, 36 in. wide, planes 18 ft. long; one Iron Planer, 36 in. wide, planes 18 ft. long; two Upright Drills, 60 in. swing, very heavy; two Shaping Machines, 8 in. stroke; one Shaping Machine, 12 in. stroke; also, a large number of Lathe Chucks.

SECOND HAND (N. Y. S. E. Co.'s make).

Two Ergite Lathes, 20 in. swing, 8 ft. bed; one Engine Lathe, 25 in. swing, 8 ft. bed; one Engine Lathe, 26 in. swing, 13 ft. bed; one Engine Lathe, 26 in. swing, 13 ft. bed; one Engine Lathe, 26 in. swing, 13 ft. bed; one Engine Lathe, 26 in. swing, 17 ft. long; one Iron Planer, planes 60 in. wide, 42 in. high, 15 ft. long; also, a large number of Lathe Chucks.

MISCELLANEOUS:

Lathe Chucks.

MISCELLANEOUS:

One "Davy Bros." 1200 lb. Steam Hammer; one "Ferris & Miles" 2000 lb. Steam Hammer; one No. 4 Wood. Light & Co. Drill, 32 in. ewing; three 21 in. swing Upright Drills; three 4 Spindle Drills; three common Milling Machine; one No. 3 Smith & Garvi Milling Machine; one Brown & Sharpe Universal Milling Machine; one Mason Milling Machine; one 24x24x5 ft. Planer; &c., &c.

The above tools have been little used, will be sold very low and can be seen at the store of

GEORGE PLACE MACHINERY AGENCY.

A. PURVES & SON, Corner South & Penn Streets, Phila.,

Scrap Iron & Metals, Machinery, Tools, Shatting & Pulleys, Steam Engines, Pumps & Hollers, Copper, Brass, Tin, Babbit Metals, Foundry Facings. Best Quality logot Brass. Cash paid for alkinds of Metals and Tools.

DROP FORGINGS.

The TRENTON VISE & TOOL WORKS, Trenton, N. J., having increased their facilities, are now able to do all kinds of

Iron and Steel Drop Forgings HERMANN BOKER & CO., Proprietors, 101 & 103 Dunne St., N. Y.

Steel Castings.

CHESTER STEEL CASTINGS CO.,

Important to Manutacturers. BISSELL, WELLES & MILLET,

Auctioneers and Commission Merchants, No.

15 Marray St., New York,
Solicit from Manufacturers and others consignments of Hardware and Cutlery for our weekly Auction Sales to the Trade, or at private sale for carb, as desired. Our facilities for moving large lines of goods are unsurpassed. Advances made if desired.

Wanted,

A Machine Shop Foreman of experience wants position. Is familiar with the best m thods of do-ing work and employing men. Has had experience in building Steam Engines, Special and general Machinery Reference given

Tariffville, Conn.

Wanted-A Partner,

In a foundry and machine business, already well established. Locality splendid and healthy. A practical man with means is wanted to join a practical man who is already well established. CAR WHEEL FOUNDRY, P. O. Box 134, Selma, Alabama

Hardware Business For Sale,

in city of about 20,000 inhabitants, surrounded by fine agricultural district, near New York. Satisfactory reasons for selling. Address A. B.,
Office of The Iron Age. 10 Warren St., N. Y.

FOR SALE. Second-Hand Engines,

4 pairs of	double	Engi	nes.	26 in.	diam.x24 in. strok
8 Engines	. 22 in.	diam	.x30	in. st	roke, Horizontal.
1 Engine,	16	4.6	24	6.6	64
5 Engines	. 12	6.6	16	6.6	6.6
3 %	12	4.5	16	4.6	Vertical.
7 45	12	46	12	4.6	Horizontal.
0.6	19	9.6	19	4.5	Vertical.
Engine,	9	6.6	12	66 01	n upright postfram
41	10	4.6	12	66	double A.
Pacinos	10	4.0	63	1 66	oscillating A

7 Engines, 10 64 64 oscillating A. 3 No. 5 Worthington Pumps.
The above are all in good working order, having been used but little. Photographs of engines will be sent to parties desiring to purchase.

We also offer for sale a large assortment of Old

% in. to 1 in. thick, and Cast Iron Water and A Light, Handsome Office. Gunboat Plate Iron of various sizes, from SPIPES OF ALL SIZES.
SHICKLE, HARRISON & CO.,
St. Louis, Mo.

WATER POWER

FOR

Rent or Sale.

The Ousatonic Water Co.

Having still unoccupied

WATER POWER & MILL SITES.

Would invite Manufacturers and others wanting power to examine them, having the advantag of permanent and cheap power, and cheap freight, both by rail and water, and easy of access, being within 2% hours of New York. The location and

facilities are unsurpassed. Address

BIRMINGHAM, CONN.

Special Notices.

Shifting Apparatus,

The advantages gained by using Ramsey's Car Truck Shifting Apparatus, are as follows : 1st.—The power required to run a car on the level rack is sufficient to separate the trucks from a car

track is sufficient to separate the trucks read body.

2d.—It avoids twisting or straining the car frames.
3d.—The manufacturing cost of this Shifting Apparatus will not exceed one hundred dollars. And each one is capable of deing more work with less strain to the car, and without the assistance of an extra Steam Engine, than a Steam Hoist, costing twelve thousand dollars.

At each one of the principal stations where car wheels are regularly tested to see how they stand the wholes are regularly tested to see how they stand the

wheels are regularly tested to see how they stand the journey, a switch is placed, having: a depression or plt about eighteen inches deep, with gentle inclined at each end, and on each side a narrow track, remaining on the level, upon which is small but strong trucks, designed to carry supporting beams or cross-bars extending from one to the other across the pit, for the purpose of bearing the car body, while the trucks run down the incline raits to the pit.

A Working Model of this Apparatus is on exhibi-

220 S. Fourth Street, Philadelphia, Pa. Communications may be addressed to

RAMSEY & SCARLETT, as above, or to Box 162, Cobourg, Ontario, Canada, See The Iron Age of Sept. 7, 1876.

REMOVAL.

The office of THE IRON AGE will be re noved May 1st, 1877, to No. 83 Reade street, southeast corner of Church street.

Wanted, Light T Rail.

vorn, 25 to 35 lbs. T Rail, can find a purchaser at a easonable price, by addressing (with price delivered n New York or Philadelphia.)

D. G. AMBLER, Uties, N. Y

W. & A. C. SEMPLE. (Manufacturers' Agents.)

RAILWAY SUPPLIES, METALS, &c.

44 Third St., LOUISVILLE, KY. We solicit the business of manufacturers who are estrous of being represented in this market.

WANTED.

POSITION AS MANAGER OF IRON AND STEEL WORKS.

Refers for commercial ability to Messrs. Howland t Aspinwall, New York.
For Engineering —To blast furnaces built by my

ate firm for North Chicago Rolling Mill Co. and

FOR STEEL .- To the use of my Patent Proess by John Cockerill & Co., Scraing, Belgium; chneider & Co., Creusot, France, and the Fagersta Steel Co., Sweden, for Bessemer Steel made by aking cast iron direct from the blast furnace without adding any spiegeleisen; the steel costs 20 per cent, less to make and sells for 30 per cent more than that made by use of spiegeleisen. Samples of this steel are the exhibits of the Fagersta Steel Works at the Exhibition, now in Museum of Mining Engineers, Memorial Hall, Philadelphia.

FOR IRON.—To exhibits of wrought iron in the Museum of the Mining Engineers which was made by me at Hamburg, Pa., and is superior to Norway for strength, ductility and purify; numer-

JAMES HENDERSON, 30 Vesey Street, N. Y. Stock of Hardware For Sale by Assignees.

The stock of Hardware at 74 and 76 East Randolph treet, Chicago, belonging to the estate of Messrs J. L. Wayne & Son, and comprising an excellent assortment of Builders', Cabinet and Undertakers' Hardware, together with Store Furniture and Fix-tures, is offered for sale in one lot. The purchaser secure the opportunity of suc business of a well and favorably known establish. ment, thereby making the opportunity one espe cially worthy of notice. Proposals will be received and information given

Assignees of J. L. Wayne & Son.

TO LET.

Possession Immediately.

HERMANN BOKER & CO., 101 Dunne Street. N. Y

Hardware Business. FOR SALE.—An old stand, facing two streets at low; good help, and doing a prosperous bus

rent low; good help, and doing a prosperens business; large back country; the best reasons for selling. Address G. M. BRUBAKER,

Millersburgh, Dauphin Co., Pa.

Engagement Wanted.

A business man of large experience in manufac-turing and trade, accustomed to the management of men and works, desires an engagement in any branch of business or industry. References of the most satisfactory character given.

Office of The Iron Age, 10 Warren St., N. Y.

Wanted.

A young man with considerable business experience, active, energetic and of good address, dealers a position as sales agent for a line of iron manufacture or other staple goods. Has excellent business habits, and is a hird worker. Acquainted with all manner of office work, and would make himself useful in that capacity when not otherwise employed. Good references. Address.

Office of The Iron Age, 229 S, 4th St., Philadolphia,

Special Notices.

Klein, Butschke & Co., No. 179 Pitt Street, Sydney, AUSTRALIA.

GENERAL MERCHANTS

Commission Agents. Every Attention Paid to Constanments

and Agencies. BANK OF NEW SOUTH WALES, Sydney

J. KLEIN & BUTSCHKE, Hamburg, Germany I am prepared to make arrangements with Eastern manufacturers to act as their agent for the sale of

Hardware, etc., on the Pacific Coast.

CHARLES OTTO,

(ESTABLISHED 1854.)

Importer & Dealer in HARDWARE, Manufacturers' Agent, etc.

REFERENCES:

Sargent & Co., 37 Chambers Street, New York. van Wagoner & Williams, 82 Beekman St., N. Y. f. Hessenbruch & Co., 10 N. 5th St., Philadelphia The Pennsylvania Tack Works, Norristown, Pa. The Pacific Bank, San Francisco.

EXPORT TO RUSSIA.

We are established at St. Petersburg for the sale of American Machinery, Hardware, Agricultural Im-plements and technical products generally. We beg to solicit correspondence with manufacturers desir us of being represented in Russia. Familiar with the wants of the trade, and as Civil Engineers being brought in contact with the industrial interests, we are enabled to successfully introduce American products. We are also able to obtain at the lowest rates, patents for any American invention the sale of which is placed in our hands. Address all circulars and price lists to HARTOCH BROS.,
Galerna 56, Quart 1, St. Petersburg, Russia

Any information desired will be furnished by our American correspondents, Messrs. Pfaelzer Bros. & Co., 421 Market St., Philadelphia.

American Manufactures in England.

Office of The Iron Age, 10 Warren St., N. Y.

For Australia and South America.

Address, with full name (all communications confinitial), HARDWARE, Office of The Iron Age. 22) S. 4th St., Phila., Pa

MANUFACTURERS desirous of introducing their goods to the British and Continental Markets, are advised to insert advertisements in the newspaper 66 IRON, 29 published every Saturday, at 99 Cannon Street,

London, E. C. SCALE: First 3 lines, 3/; every additional line, 10d Price, 6d. per Copy, or 30/ per annum, inclusive of postage to the United States

RARE Business Opportunity,

A party of capitalists, owning a magnificent mar ufacturing establishment, having unequaled facilities, 40 miles from New York, with daily rail and water communication, will offer superior inducements to any manufacturing company or firm, having an already established business, to locate with them. Hardware and machine lines preferred.

P. O. Box No. 4629, New York. For Sale. A No. 5 Geared Stiles & Parker Press. Perfect rder. Quite new. Latest pattera. B. D. WASHBURN & CO., Boston.

SPECIAL NOTICE MEN'S SINGLE GUNS,

n addition to the former line of A. Simon's, Liege, now offered. SILESIAN SHEET ZINC. LOUIS WINDMULLER & ROELKER, 20 Reade Street, N. Y.

THE BULLARD MACHINE CO.,

(LIMITED.) No. 14 Dey Street, New York. Successors to

ALLIS, BULLARD & CO., Limited. Dealers in New & Second-Hand

MACHINERY. SPECIAL NOTICE.

Special Notices.

THE IRON AGE BOOK DEPARTMENT.

DAVID WILLIAMS,

10 Warren St., New York.

The following standard works, of especial interest our readers, will be sent, postpaid, on receipt of

BOX.—A Practical Treatise on Heat:
As applied to the Useful Arts; for the Use of Engineers, Architects, etc. By Thomas Box, author of "Practical Hydraulics." Illustrated by 14 plates containing 114 figures. 12mo., second edition.

tion. \$5.00

BOX.—Practical Hydraudics:
A Series of Rules and Tables for the use of Engineers, etc. By Thomas Box. 12mo...... \$2.50.

BUTTS.—The Timan's Manual and Builder's and Mechanic's Handbook.
This work is designed for the use of Timmen, Japanners, Coppersmiths, Plumbers, etc., etc. With compositions and recipes for use in the aris. By I. R. Butts. AMPIN. - A Practical Treatise on Mechanical Er

DADDOW & BANNAN.—Coal, Iron and Oil; or the Practical Miner:

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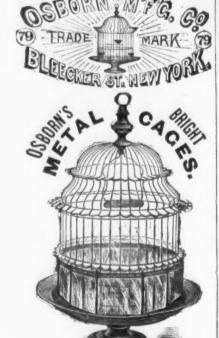
Dickens Chas.—Pickwick Papers. Cheap English Edition. 12mo, picture boards. London, 1877. Keitner's Book of the Table. A manual of Cookery.
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London.

I have three patents for Dies, Machinery and Tools for making Augers and Bits, each running seventeen years, dated as follows: Dec. 19, 1895; January 31, 1896, and July 3, 1866. There is a special claim on each of the dies. All persons infringing on said patents will be held responsible to the extent of the law. Russell Jennings.

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RESIDENT BUYER. — A gentleman of more than twelve years' experience in the general hardware business, and for several years past acting as buyer of the entire stock of one of our large Eastern wholesale houses, will make arrangements to act as buyer for a few Western or Southers correspondents. Thoroughly understands the requirements of both markets, and being constantly in communication with all Eastern manufacturers, offers his services in this behalf. Best of references furnished. Address G. U. S..

P. O. Box 4743, Now York City,



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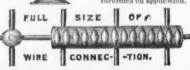
Also OSBORN & DRAYTON in twelve different patents. We are cout new and beautiful designs to m ALVAN DRAYTON, General Agent.



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Patented Bird Cages. Japanned and two kinds of Brass. With or without

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In the market for the use of Ocean Steamers, Tugs,
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Puddling Furnaces, Glass
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Blacksmithing, Brick and Lime Burning, and General Industrial Purposes.
These coels can be delivered to all points reached by railroad or navigation.

THE IMPROVED Centennial Bracket Saw!



SHIPMAN & BINDER, 111 Water St., Rochester, N. Y.



Manufacturers of

IMPROVED Gimlet Pointed Wood Screws,

Patented

1876.

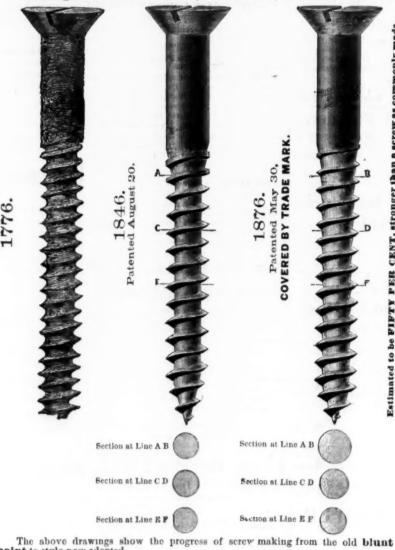


After forty years' experience we offer to the trade our **Centennial Screw**, patented May 30, 1876, as the best we have ever known.

The method of manufacturing is also patented, and we are changing our machinery as fast as possible, to manufacture the **improved** article only. To introduce them, they will be sold at same price as the old style screw.

The new screws will be packed in manifa colored **boxes** with new label covering end of box, and **enlarged figures** showing plainly contents.

To distinguish this screw we have adopted a trade mark, which is also secured to us.



point to style now adopted.

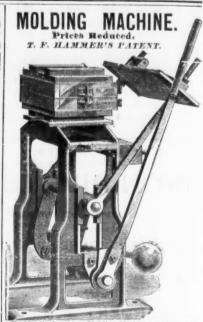
Experience has shown that the weak point of screws, as formerly made, is at the heel of the thread, where all the strains of forcing the screw into the wood naturally

To avoid the sharp angle existing in the old style of screws has been the aim of all manufacturers, but every expedient hitherto adopted has proved as objectionable as the evil complained of.

It will be seen in our **new screw** that not only is the sharp angle avoided, but the strength very much increased, as illustrated above. See sections at lines.

CLAIM.

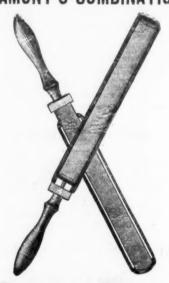
"A Pointed Wood Screw naving the outer periphery of the thread upon us body cylindrical, while a portion of the body below the thread and near the neck is conical, the remainder of the body to the point being cylindrical, and yet having all the thread brought to an edge of a constant angle, without jogs in the paths between the threads, substantially as described."



T. F. HAMMER,
Sole Manufacturer, Branford, Conn

Malleable Iron Castings made to order.

LAMONT'S COMBINATION



Is a four-side strap, combining two grades of hones with two elastic finishing sides of leather. It sells readily and gives great satisfaction. Price, \$6 per dozen. Discounts to jobbers. Send

THE SPRAGUE NOVELTY WORKS,

ROCHESTER, N. Y. New York Office, 26 Cliff St.

The Oldest Shot Tower in America.



THOMAS W. SPARKS,

American Standard Drop and Buck Shot and Bar Lead.

121 Walnut Street, Philadelphia. Premium awarded by the Judges of the Centennial aternational Exposition for uniformity and general and finish of Pellets.



H. PRENTISS & CO.,

GODDARDS PATENT-RELIEVED Machinists' and Gas Fitters'

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Machinists' Supplies.

E. A. GODDARD,

Late N. Y. Tap & Die Co.,

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"CLIMAX" BARN DOOR HANGERS. "ACME" Barn Door Rollers.

Moore's Anti-Friction Sliding Door Sheaves.

S. H. & E. Y. MOORE,

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PRICE LIST.

Each set packed in a paper box. M doz. sets in a case.

Liberal discount to the trade.

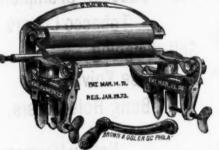
For sale by the Hardware Trade generally.

S. H. & E. Y. MOORE,

No. 68 Lake Street, CHICAGO, ILL.

THE AMERICAN MACHINE COMPANY, Philadelphia, Pa.,

SPECIALTIES OF LIGHT IRON WORK.



CROWN WRINGERS,

White Rubber Rolls, Galvanized Malleable Iron Frame Work, bel Springs, &c. Noted for Strength, Durability, Efficiency and 1% in. diam., 10 in. long. No. 2%, Rolls 1% in. diam., 13 in. long. No. 4, Rolls 2 in. diam., 12 in. long.

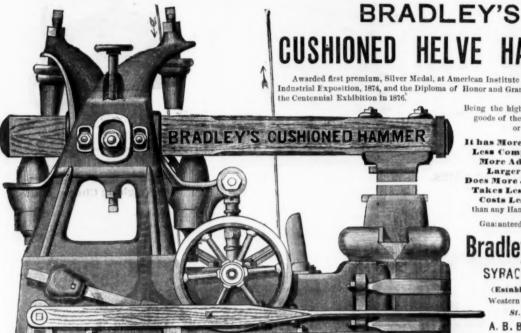


CROWN FLUTING MACHINES,

with valuable improvements over other style Macrines. Palent Spring Arrange ment and Clamping Device. Noted for Superiority of Finish and Practical Advantages. The leading Machine in the market.

Sizes (length of Rolls), 4½ inch, 6 inch and 8 inch.

Rolls with 10, 12, 15, 18, 22, 36 and 30 flutes.



CUSHIONED HELVE HAMMER Awarded first premium, Silver Medal, at American Institute Fair, 1873, Cincinnat

Industrial Exposition, 1874, and the Diploma of Honor and Grand Medal of Merit at

Being the highest award given any

or Europe. It has More Good Points, Less Complication.

More Adaptability, Larger Capacity, Does More & Better Work

Takes Less Power, Costs Less for Repairs, than any Hammer in the World.

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SYPACUSE, N. Y.

(Established 1832.) Western Office, 22 S. Canal

St., Chicago, Itt. A. B. BARNES, Manager.

COBB & DREW.

Plymouth, Mass. turers of Copper, Blass, and Iron Rivets: Com-Swedes Iron, Leathered, Carpet, Lace and Gimb Finishing, Hungarian, Trunk Clout and Cigas s, &c. Livets made to Order.

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165 Greenwich Street. Agent for the Philadelphia Star Carriage and Tire Bolts.

THE AMERICAN WIRE NAIL CO.,

Molding, Trimming, Upholstering & Finishing Nails, **Escutcheon Pins and Wire Nails**

Of all kinds and sizes, with Flat, Oval, Depressed, or Countersunk Heads, with or without points Warranted Well Made and of Superior Quality. OFFICE AND WORKS, Covington, Ky. Lock Box 853.

The Patent Automatic Stokers

the medal and highest awards, and the Patents for which in the United States are owned exclusively by the subscriber) are now offered for the first time to the users of steampower in this country, with full confidence that the satisfactory results obtained in Great Britain and on the Continent of Europe (where over 1200 of them have been erected within the last few years), will be fully realized here. Some of these results are: The generation of from 25 per cent. and upward of steam from a given grate surface above what is obtained from the same quality of fuel fed by hand. The lessening of the cost of steam from 10 to 30 per cent. from being able with the Stokers to properly burn a lower priced fuel. The entire removal of the smoke nuisance. The lessening of the labor of the fireman. Their use also reduces materially the temperature of the fire room and also prevents the injury to the boiler caused by the contraction and expansion of the plates resulting from the frequent opening of the fire doors in hand firing. These and other advantages have secured their introduction into the boilers of many of the largest Mills and Iron Works in England and other countries, and we are now turning out an average of 10 machines per week. A few letters are given from some of those having them in use, the statements in which can be implicity relied upon. For information respecting price, &c., apply to

DILLWYN SMITH,

18 S. Sixth St., Philadelphia, Pa.

From Mesers, Barlow & Jones, Albert Mill.

Bolton, May 4, 1374.
We have pleasure in informing you that after earefiled atlon we consider your Mechanical Stoker is as

the Stoker was Slack, at 8/. With the latter the man could not have kept steam up with hand firing.

We are, yours, truly.

We are, yours, truly, For BARLOW & JONES (Limited), J. R. BARLOW

CENTENNIAL EXHIBITION PRIZE MEDAL AWARDED. WARRANTED.

The Double Screw Parallel "Leg" Vise



No. 1, Jaws 3% in. x % in., Screws % in. diameter, Lever 9 in. long, No. 1, Jaws 8½ in. x ½ in., Serews ½ in. diameter, Lever 9 in. long, opens 4½ in. x 1 in., Serews 1½ in. diameter, Lever 25 in. long, 10 opens 5½ in. x 1½ in., Serews 1½ in. diameter, Lever 15 in. long, 11 00 opens 6½ in.

No. 4, Jaws 6½ in. x 1½ in., Serews 1½ in. diameter, Lever 19 in. long, 16 00 No. 4, Jaws 6½ in. x 1½ in., Serews 1½ in. diameter, Lever 19 in. long, opens 7½ in.

No. 5, Jaws 1 in. x 1½ in., Serews 1½ in. diameter, Lever 24 in. long 27 00 No. 6, Jaws 8 in. x 1½ in., Serews 1½ in. diameter, Lever 26 in. long, opens 10 in.

All sizes of these Vises furnished with Swivel Attachment at same price.

same price.

THESE GOODS ARE SOLD BY THE GENERAL AGENTS
(with special discounts to the trade.)

New York.—Messrs. J. CLARK WILSON & CO.—
RUSSELL & ERWIN MFG. CO.—Messrs. HORACE
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FOR ROPE OR CHAIN.

Hydraulic OPEN MOUTH PUNCH.

McCOY & CO., 134 & 136 Duane Street, New York.



ESTABLISHED 1850.

WM. HASSALL, Manufacturer of

American and French

WIRE NAILS

With Fist, Depressed and Screw Head

SHOE NAILS of Brass and Iron.

Molding and Finishing Nails, with or without heads. Brush Makers', Upholsterers' and Un-dertakers' Finishing Nails aspecialty. Brass and Iron Fscutcheon Pios, with flat, round and fancy he ds, all sizes on hand and to order.

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ENTERPRISE MANUFACTURING COMPANY, of PA.

OFFICE AND WORKS,

S. W. Corner American & Dauphin Sts., PHILADELPHIA.



Star Smoothing and Polishing Irons, Patent Ground.



Enterprise Cold Handle Double Pointed Smoothing and Polishing Irons, (Mrs. Pott's Patent.)



Chinese Polishing Iron.

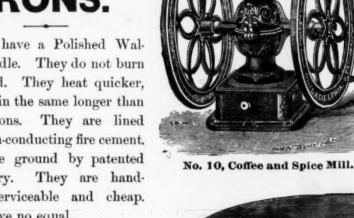
WE MAKE

Mrs. Potts' Cold Handle **Double Pointed**

SMOOTHING and POLISHING IRONS.

They have a Polished Walnut Handle. They do not burn the hand. They heat quicker, and retain the same longer than other irons. They are lined with non-conducting fire cement. They are ground by patented machinery. They are handsome, serviceable and cheap. They have no equal.

Send for Illustrated Catalogue and Price List.





Enterprise Cold Handle Double Pointed Smoothing and Polishing Irons, Girls' Size.







No. 3, Coffee and Spice Mill.



No. 18, Coffee and Spice Mill.

WE MAKE American Coffee, Spice and Drug Mills, Sausage Stuffers, Fruit, Lard and Jelly

Presses combined. **Tincture Presses.**

Self-Measuring Faucets, Champion Tobacco Cutters.

Self-Weighing Cheese Knives,

> Bung Hole Borers, Hollow Augers.

Send for Illustrated Catalogue



Self-Weighing Cheese Knife.



Sausage Stuffer, Fruit, Lard and Jelly Press combined, (Shut.)



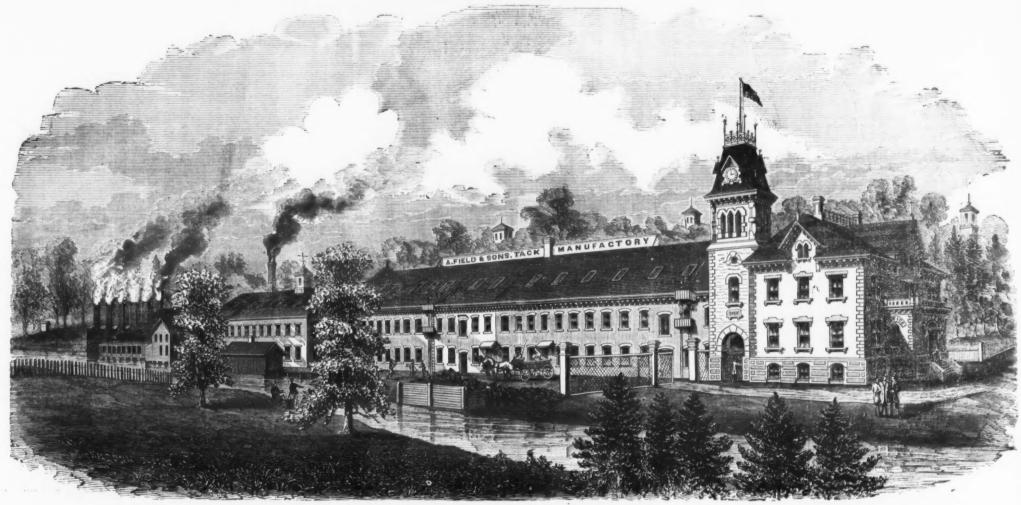
VIEW OF WORKS.

Self Measuring Faucet, 250,000 now in actual use.



Sausage Stuffer, Fruit, Lard and Jelly Press combined, (Open.)

ESTABLISHED .1827.



ENTIRE LENGTH OF WORKS 700 FEET.

A. FIELD & SONS

TAUNTON, MASS.

Manufacturers of

IRON
COPPER
TINNED
SWEDES IRON
UPHOLSTERERS'
CARD CLOTHING
PAIL AND TUB
GIMP
LACE
PATENT COPPER PLATED
LARGE HEAD CARPET

FINISHING
TRUNK
CLOUT
CHAIR
CIGAR BOX
HUNGARIAN
HOB
SILVERED OR JAPANNED LINING
SILVERED OR JAPANNED SADDLE
TUFTING
COPPER CUT

TACKS NAILS

BRADS AND PATENT BRADS.

LEATHERED CARPET
TINNED CARPET
COLORED COATED CARPET
COFFIN LINING
MINERS'
BRUSH
LOOKING GLASS
SHOE OR LASTING
ROUND HEAD
ROOFING
EVERY STYLE OF

BOAT REGULAR
BOAT CHISEL POINTED
FINE TWO PENNY
FINE THREE PENNY
PATENT COPPER PLATED
CHANNEL
AMERICAN IRON SHOE
8WEDES IRON SHOE
ZINC SHOE
STEEL SHOE
CHARCOAL IRON SHOE

With New, Improved, and Patented Machinery. we shall now make

GLAZIBRS' POINTS,

ONE OF OUR SPECIALTIES.

Any variation from the regular size or shape of the above named goods made from samples to order.

QUALITY GUARANTEED TO BE SATISFACTORY.

OFFICES AND FACTORIES. - - - - TAUNTON, MASS.

Warehouse and Salesroom at 78 Chambers Street, New York.

Trade Report.

Office of The Iron Age. | Wednesday Evening, April 4, 1877. | During the past week the interest of the financial markets has centered in the Stock Exchange, which has been feverish and unsettled In other departments Wall street has been quiet. The money market continues easy, with rates at 2 @ 4 per cent on call. The quotation of prime business paper is 31/4 @ 5 per cent.

The gold market has been without featur The following shows the daily range of th

	Highest.	Lowest.
Thursday	103	104%
Friday		-
Saturday	1051/	105
Monday		1043
Tuesday	1053/	104%
Wednesday		104%
Government bonds s	are dull and	steady.

State bonds are lower, especially Tennessee on account of the refusal of the Legislature o that State to pay interest on its bonded deb Railway mortgages are depressed.

In the stock market a variety of causes hav operated to produce an unhealthy sensitivenes and weaker prices. Among these are th threatened outbreak of another railroad was the continued sharp competition of the tele graph companies, and the uncertainty which still attends the issue of the movement looking to the organization of a new coal combination The preliminaries are all arranged, but the diferences of opinion among the managers of th principal companies as to the apportionment of the tornage agreed upon as the total prodution, cannot be easily reconciled. During th week the principal dealings have been in Western Union, Lake Shore, Delaware, Lackawanna and Western, Michigan Central, New York Central, Pacific Mail and Delaware and Hudson. We give below the closing quotations of

The bank statement shows a reduction in total reserve of \$2,298,400, made up of \$2,200,400 to keep the trade fairly employed. Prices conspecie and \$98,000 legal tender notes, and a reduction of \$1,778,125 in the surplus reserve, the latter now being \$9,612,075. The following is a comparison of the bank averages during the past two weeks:

March 31.

Foreign trade movements for the week are shown in the following tables:

IMPORTS. For week ended March 31 :

1875. 1876. Total for week. \$8.866,275 \$7,447,171 Prev. reported. 89,131,706 79,798,214 Since Jan, 1... \$97,997,991 \$87,245,385 \$84,511,878 Among the imports of general merchandise

were articles valued as follows:		
	Quant.	Value.
Anvils	10	\$143
Brass goods	10	1,309
Bronzes		1,590
Copper		2,024
Catlery	67	22,178
Gas fixtures		851
Guns	15	1,772
Hardware		1,150
Iron cotton ties		598
Lead ashes		1,68
Metal goods		12,460
Needles		9,124
Old metal		176
Platina		2,277
Per. caps		246
Saddlery		1,215
Steel	.1,105	16,136
Tin, boxes		88,613
Tin, 2695 slabs1		81,903
Wire		2,037
Zinc	21,480	1,226
EXPORTS EXCLUSIVE OF SI	PECIE.	

For week ended April 3: 1875. 1876. 1877. For the week......\$4,596,059 \$4,801,300 \$3,901,31 Previously reported.58,005,090 60,070,949 67,611,01

Since Jan. 1 \$62,601,149 \$64,872,249 \$71,512,33
EXPORTS OF SPECIE.
For week ended March 31:
Total for the week
Total since Jan. 1, 1877\$3,436,100
Same time in 1876
Same time in 1875

Government bonds at the close were quoted

Bid.	Asker
U. S. Currency 681231/	1233
U. S. 6s 1881. reg 11114	112
U. S. 6s. 1881, con 11236	112:
*U. S. 6's, 1865, reg	106
U. S. 6's, 1865, cou	1082
U. S. 6's, 1865, new reg1085	1087
U. S. 6's. 1865. con	1083
U. S. 6's, 1867, reg	1113
U. S. 6's. 1867. coa	1113
U. S. 6's. 1868, reg11334	113
U. S. 6's. 1868, con	1183
U. S. 10-40 reg	111
U. S. 10-40 con	1113
U. S. 5s. 1881, reg 110%	1103
U. S. 5s, 1881, cou	1103
U. S. 41/6. 1891, reg 106%	1063
* Ex interest.	
The following are the closing quota	tions o

The following are the closing quota	tions c
active shares : Bid.	Asked
Atlantic and Pacific Telegraph 23%	24
Chicago & Northwestern 81%	
Chicago de Morthwestern 017g	814
Chicago, Rock Island and Pacific 9734	494
	973
Chic., Bur. & Quincy1023	103
Col., Chic. & Ind. Cent	2,5
Clev., Col., Cin. and Indpls 24	-
Cleveland and Pittsburgh 87	90
Chicago & Alton	-
rieletted	Minor
Consolidation Coal 20	28
Canton 2034	25
Del., Lack. and Western 58	585
Delaware & Hudson Canal 48%	483
Adams Express	100
American Express 51	52
United States Express 43	44
Wells, Fargo & Co. Express 82%	883
Erie 6½	6 %
" Pref 1434	145
Harlem137	138
Hannibal & St. Joseph 1034	21
" Pref 2154	22
Illinois Central 435	44
Lake Shore 473%	47%
Michigan Central 45%	4534
Morris & Essex 80%	8136
Milwaukee & St. Paul 16%	17
" Pref 452	454
Mariposa 434	6
Man 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	***

lew Jersey Central	836	9
ew Jersey Southern	816 86 316	1 8
hio & Mississippi	356	
" Pref	5	- 8
acific Mail	15%	15
anama	8.5	100
itteburgh and Fort Wayne		97
uicksilver	14	14 21
L'ICL	20	21
t. L., Kan. City Northern	81/9	25
Pref	5	6
ol., Wabash & Western	68	69
nion Pacific Vestern Umon Telegraph	58%	59
cetein chion relegraph	10/3	00

MINING STOCKS.

Mr. Ogden Haight, No. 65 Wall street, sends us the following report of the business of the

e.	New York Mining Stock I	Exchap	ge for t	he pas
he	wcek :			
ue	COPPER STO	CEQ.		Sales.
	COLLEGE	Bid.	Offered.	
at.	Allouez Mining Co		\$10.00	***
36	Atlantic "	6.50	7.00	***
74	Atlantic "Calumet & Hecla Min. Co	180:00	182 00	***
		34 00	88.00	
7/8 3/4		9.00	12.00	***
36	Madison	.32	.35	***
32	Franklin 4 Madison 4 Menard 4 Minnesota 8 National 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		·35	***
	Minnesota			***
y.	National "	.37%	****	***
8,	Osocola "	23.20		***
10	Pewabic "	2.20		***
	Quincy "	36,00	99.00	***
it.		3.00	4.00	× * *
	Rockland	****	****	***
ve	GOLD STO	CKS.		
	Am. Flag G. M. Co., Col Bobtail "Lacrosse " " " " " " " " " " " " " " " " " "	.07	.10	
88	Bobtail "	1.45	1.55	35
he	Lacrosse " "	-28	-59	4,80
-	N. Y. & Col. "		3.32	
ΙΓ,	Seaton Consolidated	4.87%	4.20	10
e-	LEAD STOC	CKS.		
ch	St. Joseph Lead Co	5.20	7.00	***
g	SILVER STO	OCKS.		
	Silver Islet Mining Co	480		
n.				***
f-	TUNNEL COM			
ie	Bobtail Tunnel	3.25	4.00	* * *
	MISCELLANEOUS			
10	Smith & Parmelee Hukill of Colorado	'10	.16	
C-	Hukill of Colorado	4.1236	4 25	***
he	25 Shares Wilson Direct Iron	Proces	s Co. at	10c.
-				

GENERAL HARDWARE.

There is little if any difference to note in the condition of the market this week compared with last. There are very few buyers in the city, but letter orders, although not as a rule for large quantities, are sufficiently numerous tinue firm, and in some cases the tendency is decidedly upward.

On the 1st instant the firm of Peace & Hogan, Saw manufacturers, Brooklyn, E. D. was dissolved. Harvey W. Peace will continue the Saw business on his own account, and John Hogan will devote his entire attention to the steel business, in which he is associated with Thomas C. Burrows, under the style of Hogan & Burrows, agents for Singer Nimick & Co., of Pittsburgh.

The abiding faith which the members of the Lalance & Grosjean Mfg. Co. have in the wholesomeness of their Marbleized Ironware is fully set forth in their letter, which we print below. In this connection we would remark that although this ware is comparatively new as regards its manufacture and introduction in this country, it has been for years a staple in the warehouses of the Hardware dealers of Europe, At the Centennial Exhibition it was exposed to the severest chemical tests, and the Judges of Awards in their report gave it the following high indorsement: "Marbleized (Stamped Ironware); a remarkably tough and durable enamel, incorporating itself thoroughly in the pores of the sheet iron, and is unaffected by excessive heat, or acids of any description does not flake off with use."

odees not flake off with use."

Office of the LALANCE & Grosjean Mrg. Co., 89 Beekman and 55 Cliff streets, New York, April 4th, 1877.

Editor of The Iron Age—Dear Sir: A good deal of inquiry has been made of us lately as to whether our Marbleized Ironware contained any poisoncus properties, and we have also had our attention called to some paragraphs in the newspapers, warning the public under pain of death, to desist from the use of Marbleized utensils, and more especially from food prepared in them. The glaze on this ware is the same as the glaze on your porcelain dinner plate—on the cup that contains your morning coffee. It is the same dangerous substance that is to be found on the old-fashioned yel low ware, so favorably known to all good housewives, and yet, strange to say, no complaint of poisonous properties has been heard in regard to crockery, and never will. The only basis for this "tempest in a teapot" is found in the fact that the manufacture of Marbleized or Enameled Ware is confined to only a few concerns, while the manufacture of Tinware. Ironware, both east and ture of Marbielzea or Enameled Ware is confined to only a few conceins, while the manufacture of Tinware, Ironware, both cast and stamped and pieced, is conducted on a large scale in almoss every city of importance in the United States. Marbielzed Ironware is rapidly displacing the trade so long enjoyed by the makers of Tin and Iron goods, and something must be done to stop its progress, and so misrepresentation is called in to aid a dying industry.

Editor, the officers of this company Mr. Editor, the officers of this company are a healthy looking lot—they use Marbleized Ware in their families—their babies' pap is prepared in Marbleized pannikins, their buckwheat cakes are cooked on Martleized griddles, and while their doctor's bills are no larger than those of their competitors who have raised this line and cry against these goods, their housewives enjoy in the utmost security the greater cleanlines, which the use of Marbleized Ware sifords over any other material used in the manufacture of cooking utlensils.

Very respectfully, yours,

LALANCE & GROSJEAN MFO. Co.

The demand for Nalls is, as is usual at the

The demand for Nails is, as is usual at the opening of the month, fairly active. The same conditions we reported last week exist regarding prices. We quote 10d., \$2.65, net, in a small way. For large lots a slight concession

from this figure is easily obtained. The firm of Field & Hardie, after a twentyfive years' connection, announce the dissoultion of their partnership, Mr. Hardle retiring on account of ill-health. Mr. Field will continue the business on his own account at the old stand. 633 Market street, Philadelphia.

Sargent & Co., in an advertisement which appears among "Special Notices" on the 15th page, invite the attention of the trade to their large stock of Iron Rivets.

The manufacturers of Iron Rivets have advanced their prices, as will be seen by the

PROVIDENCE, April 2, 1877.
GENTLEMEN: On and after this date of prices for Rivets will be as follows:

cent.
Terms: Cash within 30 days from date of Irems: Prices not guaranteed, and subject to change without notice. Delivery made at all principal points on, or east of, the Misslssippi River.

River.
Soliciting your orders, which shall have our careful attention, we remain,
Yours, very respectfully,
AMERICAN SCREW Co.

PLYMOUTH, Mass., April 2, 1877.

GENTLEMEN: On and after this date my prices for Rivets will be as per revised tariff of April 2, 1877, with the following discounts: Black and Tinned Iron Rivets, and Block and Carriage Rivets, in papers of M or C each......dis. 40 ; Iron Rivets, in bulk or "lb." papers......dis. 30 ; Quantity Discount.—Any party purchasing and receiving \$125 worth or more of Iron Rivets and Burrs, during the three months ending July lat next, shall be entitled to an additional discount of 7½ per cent.

Terms: Net cash in 30 days. Prices not guaranteed.

guaranteed.
Freight: All goods delivered in Boston, New York, Philadelphia, Baltimore and all principal points on or East of the Mississippi River.
The above prices subject to change without

I thank my customers for their liberal patron age in the past, and solicit a continuance of their esteemed orders. Yours, very respectfully, SAMUEL LORING,

Proprietor of Plymouth Tack and Rivet Works.

Office of Biddle Hardware Co., Agents for American Screw Co., Philadelphia, Pa., April 2, 1877.

We offer our stock of American Screw Com-pany's Screws at the following discounts, sub-ject to change without notice, viz.: Flat Head Iron Screws dis. 60 9
Round " dis. 50 9
Flat " Brars " dis. 55 3
Round " dis. 40 9

We will fllow a further discount of 7½ per cent. If the cash for Screw bills is received by us within thirty days of their date. Present supply, 65,000 gross per day. On and after this date our prices for Rivets will be ss follows: Iron Black, Iron Tinned Rivets (in papers of M.).....dis. 40;

cent.
Terms: Cash within 30 days from date of invoice. Prices not guaranteed, and subject to change without notice.

Clark & Co., Buffalo, N. Y., quote Clark's Improved Shutter Hinges, Nos. 3, 21/4, 2, 11/4, 1 and 0 at discount 70 per cent. These goods are adapted to the requirements of the Southern markets. They have issued the following:

- BUFFALO, March 26, 1877.

From this date, and until further notice, the prices of our Blind Hinges will be as follows: Price List. Per doz. No. 40, For brick, throws the Blind 1½ inches from the casing.

No. 40, For wood, throws the Blind 1½ inches from the casing.

No. 50, For brick, throws the Blind 3¼ inches from the casing.

Discount, 60 per cent. 8.20

5-25

The Albany and Rensselaer Iron and Steel Co., Troy, N. Y., are manufacturing Walker's Forged and Hammered Horseshoes, which they claim possess all the requirements of a perfect Shoe, and in addition greater smoothness of finish, freedom from fins, scale or oil than those of other makers. They quote these Horseshoes at \$8 80 per keg, f. o. b., at Troy, with the usual quantity discount. They are packed single sizes, in a keg; also the follow-

3; 2, 3, 4; 3, 4, 5; 5, 6. W. & B. Douglass, Middletown, Conn., and Nos. 85 and 87 John street, New York, have issued a handsomely illustrated supplement to their catalogue of 1875 and 1876. This supplement contains 24 pages devoted to descriptions of their new styles of Force Pumps, Pitcher Pump', Hydrant and Street Washers, Bilge and Double Acting Ship or Fire Pumps. Power Pumps. &c.

Maltby, Curtis & Co., No. 34 Reade street, as that they have added to specialties the manufacture of Maple and Rosewood Faucets, with tin key, of all sizes.

Alex. M. Lesley, No. 226 West Twenty-third street, illustrates in his advertisement on page 24 his improved Zero Refrigerator, to which we invite attention. Among the testimonials which we have seen regarding these Refrigerators is one from Prof. E. L. Youmans, from which we extract the following:

An examination of your Zero Refrigerator satisfied me that it was made upon correct principles * * and having purchased one and principles * * * and having purchased one and made trial of it, I find my experience practi-cally confirmed. It is not only an excellent article that has given great satisfaction, but it is made superior to any other of which I have had observation or experience.

Isaac Jenks & Sons, Wolverhampton, England, have issued the following circular. Mr. Isaac Jenks, Jr., can be found at their temporary office, No. 29 Peek Stip: In order to work our business to full advan-

In order to work our business to full advantage, we have decided to take it altogether into our own hands, and have taken a store at 245 Pearl and 20 Cliff streets, where we intend carrying a complete stock of Spring Steel.

The business in the United States will be conducted by our Mr. Isaac Jenks, Jr., who is thoroughly conversant with its requirements.

In thanking you for past support, we solicit your future orders, believing we shall be able to give you full satisfaction as to quality, prices and dispatch. We remain, yours, truly,

ISAAC JENKS & SONS.

We invite attention to the advertisement of Newlin & Yardley, No. 337 Market street, Philadelphia, which appears on the 9th page. Beside being Hardware jobbers they have the sole agency in Philadelphia for several important lines of Hardware.

The Sedgwick Manufacturing Company, Poughkeepsie, N. Y., have issued a revised price list for their specialties in Garden Implements, Tools, &c., which, with their discount sheet, dated February, 1877, will be found be

PRICE LIST OF SEDGWICK MANUFACTURING COMPANY No. 2, Cheese Tryers, Cast Steel, Painted Handles-Inches. 4 5 6 Per doz. \$500 6 00 No. 5, Butter Tryers, Cast Steel, Painted Handleso. 5. Butter Tryers, Cast Steel, 7 street 4 30 Inches... 12 15 18 21 24 30 Per doz....\$8 00 9 0) 10 00 11 00 12 00 15 00 Per doz....\$8 Cast Steel, 30 Inches....\$24 00

No. 8, Flour Tryers, Cast Steel, 30 inches.... No. 9, Flour Tryers, Cast Steel, 30 inches, Polished Handles.

o. 12, Coffee Tryers, 9 inches, Solid Points,
T Handles. r Mandles. 12:00 o. 3, Choose Tryers, Forged Solid Cast Steel, Painted Handles—

Per doz. . 11, Cast Steel, Wood Handle.... . 14, Elbow Door Spring, Improved..... No. 15, large size 13.56 Extra Coils for same, No. 14, 24.00; No. 15, \$4.50. No. 30, Carpet Stretcher, Cast Steel, Japanned

Edging or Border Knives.

No. 75, Weeding Forks, Malleable Iron, Flat No. 75, Weeding Forks, Malleable Iron, Flat Tine...
Tine...
No. 75 (old No. 78), Garden Reels, Malleable 1ron, 16 in, by 8 in, with Spears...
Too, 75 (old No. 79), Garden Reels, Malleable 1ron, 8) in, by 11 in, with Spears...
Per doz. set. No. 74 (Three Picens, Weeding Fork, Hoe and

Ladies' Set Garden Tools. o. So, Three Pieces, Spade, Fork and Hoe and Rake, and Steel Spade and Hoe, Malleable Fork and Rake. No. 81, Spade, Cast Steel, Blade 5x3% in., handle 25 in., varnished \$2.00 No. 82, Fork, Malleable Iron, Handle 25 in., varnished

varnished. 5.88, Hoe and Rake, Cast Steel, Hoe Blade 43/x1% in., Rake 6 Prong, Handie 43 inches, varnished. Boy's Sets Garden Tools.

ing assortments, Forward and Hind, Nos. 1, 2,

No. 98, Floor and Wall or Celling Scraper, 7 in. \$5'50 Very handy for clearing ice and snow from side-walks. Garden Hoes and Rakes. Per doz.

No. 103, Three Prong Rake and Hoe, Handled \$3:50
No. 101, Four Frong Rake and Hoe, Handled... 4:50
No. 104, Six Frong Rake and Hoe, Handled... 5:00
No. 105, Long Blade Hoe and Rake, Handled... 5:00
No. 107, Square Blade Hoe and Hake, Handled 5:00
No. 109, Two Blade Hoe, Handled... 5:00
The above without Handles, 52 cents less per doz.
No. 112, Six Frong Floral Hoe and Rake, Handled... 4:00 4.00 Handled...
No. 113. Six Prong Rake, Malleable Iron,
without Hindle...
With Handles, \$3 per doz.

Discount per cent. No. 3, Cheese Tryers. No. 6, Butter Tryers.

Saw Sets.
Pruning Shears
Pruning Saw, with Chisel.
Pruning Saw, with Hook.
Edging Knives.
Garden Trowels.
Weeding Forks.
Garden Reels.
Sets Garden Teols.
Shuffle Hoes, No. 90.
Improved Shuffle Hoes, No. 95.
socket Shuffle Hoe, No. 95. Evans, Dalzeil & Co., Pittsburgh, Pa , and 16

Evans, Dalzeil & Co., Pittsburgh, ra, and to Cliff street, New York, have issued the follow-

ing circular:

PITTSBUBGH, April 2, 1877.

We quote the following discount on wrought fron pipe from price list dated March 15th, 1876, viz.: 55 per cent. for random lengths, and 50 per cent. for pipe cut to special lengths.

No extra discount or allowance will be made for plain end random length pipe, or for railing or other pipe lighter than the standard.

Terms of sale are cash in thirty days; and in no case will credit be given longer than no case will credit be given longer than

ninety days from date, or average date of ship-

on all accounts not paid in thirty days from On all accounts not paid in thirty days from the date, or average date of monthly account, interest must be charged at the rate legal in the State where the note, draft or check is made payable for all time taken or allowed after

Buyers paying "spot cash" on receipt of invoice or bill of lading will be allowed an extra discount of 2 per cent. from the net amount of

Actual freight, as per bill lading, will be llowed on shipments to Boston, New York Philadelphia, Chicago, St. Louis and Cincin

Rebate of freight will be allowed to other points equal to the difference between the through rate from Pittsburgh and the rate from either of the above cities to destination.

Prices and terms subject to change without

Heaton & Denckla, No. 507 Commerce street, Philadelphia, have issued the following memorandum of quantities and prices of Heavy Hardware manufactured by Samuel Lewis, Dudley, England, which they desire to close out. They say: "Owing to the decease of Mr. Samuel Lewis, we are closing out, as agents, the stock of Chains, Anvils, Vises, &c., in our hands belonging to his estate, at less than the cost of importation. Annexed is a list of the stock, with prices, payable in gold, in 80 days from date of invoice. Orders will only be filled to the extent of the stock on hand

Best-Proved Short Link Coil Chain. 7.16 " Unproved Short Link Coll Chain 40 Feet, B. B. Short Link Coll, 1 inch. Short Link Twisted Coil Chain-Natural Color Cte. per lb. 6½ Dozen, 19 Link, No. 5. \$2.50 9 12 No. 4. 2.50 Bright Cow Ties.
60 Dozen, Waltham Pattern..... Cts. per lb. 2,300 lbs. Wronght Gate Hinges, 10.

2,300 lbs. Wronght Gate Hinges, 10.

Bed Screws. Per

9½ Gross, Flat Nicked Head, 5x½ in.

2½ 6x7-16 in.

10½ 6½ 6 6½x7-16 in.

15 7x½ in.

7x7-16 in.

2mare Head, 5x½ in.

Chains. I

14 16 16 14 12 12 Bright Cotter Key Vises, Solid Box. Cts. per lb.

Japanned Halter Chains.

2.50

Assorted, 49, 47%, 54, 57%, 61, 68%, 26%, 78%, 70, 71%, 83%, 84%, 80, 86, 87%, 80%, 93, 94%, 98, 101, 106, 110, 116, 113%, 113, 119%, 121%, 120%, 127%, 131 lbs.

Wought Anvils Assorted, 139, 178, 181, 201, 202, 203, 206, 215, 217, 218, 224, 225, 226, 228, 230, 231, 232, 234, 240, 243, 245, 246, 247, 262, 263, 267, 268, 270, 278, 279, 284, 306, 322, 348, 362, 10s.

BRITISH IRON MARKET.

(Specially reported by cable for The Iron Age.)

WEDNESDAY, April 4, 1877. Scotch Pig.-The market was depressed during the week, but there was a little better feeling toward the close, and prices are a trifle firmer. We quote makers' prices as follows:

Manufactured Iron .- The demand continues to improve, but it seems to have no effect on prices, which are weak. Best Staffordshire Bars are quoted £7. 10 / @ £9.

Rails.-A very fair business is doing in Rails, and the "demand is improving; prices steady. We quote Welsh, £5. 5/@ £6.

IRON.

American Pig.-The Iron business has been very dull during the week, and the tendency toward lower prices is generally acknowledged. Sales are reported of about 400 tons No. 1, various brands, at prices ranging from \$19 to \$21, and 750 tons Forge Iron at \$16.75. There is also reported a sale of 2,000 tons Hudson River Iron No. 1 at \$19, regular time. The quotations of standard brands are unaltered at \$20 for Foundry No. 1; Foundry No. 2, \$19, and Gray Forge \$18.

Scotch Pig.-No sales worth reporting have transpired during the week. The arrivals have been 200 tons Coltness and 100 tons Eglinton. We quote Glengarnock, \$25 @ \$26; Egl nton, \$24.75 @ \$25, and Coltness, \$27.25.

Rails.-We hear of no transactions either in Steel or Iron, and continue our quotation of \$35 @ \$38 for Iron, and \$49 @ \$50 for Steel, at

Old Rails. -In the absence of business, quote Old Rails, \$19 @ \$20, nominally.

Scrap.-Sales of about 600 tons Scrap Iron on private terms are reported. We quote Wrought, from yard, \$26.

METALS.

Copper.-Sales during the week amounted to but 500,000 pounds Lake Superior at 191/c. @ 191/c., and as there is some looking round, they may in a day or two be followed by further transactions of greater importance. The de-mand is slowly on the increase, but prices do not yet improve. We quote Lake Superior at the close 191/c. @ 191/e., and Baltimore, nominally, 191/c. Futures all the way to August are nominally 20%. The political agitation respecting some of the Southern States is fast subsiding, and with it disappears about the only cause of that nature detrimental to a revival in trade; we have, therefore, an unexcited period before us, and fair business prospects. As regards a resumption of Copper pects. As regards a resumption of Copper purchases for Europe, much will depend on the course of prices at London, as well as on the gold premium here. With respect to the opening of lake navigation, we would say that it is expected the first new Copper by lake, &c., will be here between the 20th proximo and the 1st of June-probably Copper, we would remark that there have been shipments from the lake region up to the 29th the ground, and the prospects for sledging mode of conveyance would last but a few days nage at tidewater is calculated at 9,000,-longer. London has improved 10/, both on 000 tons, or about one-half of the whole. cabled £77. 10/and the latter £70. 10/. When for some 2,500,000 tons, or some 300,000 the mail of the 24th ultimo left, the metal trade of England was the reverse of sanguine several years past, and more than was allotted on the subject of Copper, there being little demand in prospect for either Iudia, France or Birmingham. There is a steady inquiry for manufactures, which we quote 31c. for Sheathing and 32c. for Bolts and Braziers; New Yellow Metal Sheathing, 20c.; Yellow Metal Bolts, 25c. : and Nails, 20c., net cash.

Tin .- The auction sale in Holland, to which allusion was made in our last report, seems to have averaged the low figure of 42 guilders the 50 kilos for Banca, if the dispatches re ceived are true, which would be something like but we fear that few of the companies would 181/c., gold, here. London has remained be satisfied with it. steady since at £70, 10/@ £71 for Straits, while Penang wires to-day, \$19.80 per picul, with an exchange of 4/01/d. Singapore cables to-day: quiet, and we quote large lots, in gold, as follows : Straits on the spot, 16%c. @ 16%c. ; to arrive, 161/2c. @ 16%c.; English Refined, 161/2e.; ditto Common, 161/8e., and Banca, 19c. quiet, and prices have shown some weakness. We quote, in gold, per box, large lines, ordinary brands, as follows: Charcoal Bright, \$6.75; do. Ternes, \$6; Coke Tin, \$5.871/2. and do. Ternes, \$5.50. The foregoing quotations may be shaded on favorable specifications. The latest mail report from London, dated March 24, has the following: "There is no improvement either in prices or demand, and

We quote the range 6%c. @ 6%c., currency. At St. Louis, Soft is offering at 6.70c. @ 6.75c., currency, and ordinary at 6.50c. @ 6.60c., currency. The chances at present are that the freight will soon be lower. There has been an arrival of 4000 bars bullion by steamer. The prospect is that these bullion supplies by water will become more plentiful in the future. We should be glad if this were the case, so as to stimulate the smelting interest on this coast. Foreign Lead is inactive at 6% e., gold, nominally. In Europe Lead prices are held in check by the uncertainties of the political outlook in the East-peaceful to day and warlike to-morrow. Manufactures of Lead are in tolerably good request: Bar at 7%c., Pipe at 9c., and

Sheet at 9%c., less the usual discount. Spelter and Zinc .- We understand that Common Domestic Spelter has sold in New England centers at a figure which would be equal to 64c., currency, at New York. Trade in the metal here is quite dull, and we quote the same 6%c. @ 6%c., currency, as to brand. The demand for Foreign has also quite subsided for the moment, nor can we quote it any better than 6%c., gold. The stock here is reduced to a mere trifle, and there is none on the way. Advices are to hand from Breslau, Silesia, dated March 221, when 21,000 cwts. had changed hands during the weck at 19.75 marks the 50 kilos. In spite of this demand suddenly manifesting itself at the principal center of production and distribution on the Continent, the operators for a decline in England persisted in their efforts to keep down prices. The opinion is expressed from Breslau that prices had touched bottom there, but the provise is added that a further decline may happen if the Eastern negotiations end in war between Russia and Turkey. Sheet Zinc is flat at 8c. @81/c., gold, for Moszelmanu, and 71/c., currency, Do

Antimony-Remains unaltered at 12%c.,

Nickel.-A telegram has been received from St. Petersburg, Russia, in this city, according to which the Imperial government has resolved to sell a couple of thousand tons of old Copper coin, and replace the same by Nickel change. The immediate effect of this is not an advance, but greater firmess at the unaltered figure of \$1.85 @ \$2, gold, per pound.

COAL.

Prices under the effect of the combination rumors are reported to be firmer, and dealers report a much better feeling in the market, but it appears on investigation that even with the stronger feeling the actual selling prices are not by any means up to circular rates. While dealers are feeling that there is some hope for a greater margin, buyers take things quite calmly, preferring to wait rather than pay an advance. Only a few of the dealers and compa nies have as yet issued circulars with prices for April. Some of these show slight advances ; others, for example, that of the Delaware and Hudson Canal Co., have the same prices as last month; in other instances there is a slight decline upon some of the sizes. The general feelcombination were represented. The report of was received and a new committee was appointed to decide upon tonnage. This committee is to nearer the latter date. As regards overland present its report to the meeting, which will meet at 11 o'clock to-day. Really this question of tonnage is the one which is likely to ultimo. At that time there was little snow on give more trouble than any other, and is the one upon which the whole question of were poor, inasmuch as it was expected this the combination hinges. The proposed ton-Best Selected and Chili Bars, the former being Of this the Pennsylvania and Reading seeks tons more than its average production for to it in the letter from our correspondent. "

week before last. Upon a basis of 9,000,000 tons at tidewater, Mr. Saward makes the following distribution of tonnage, based upon the actual business of the companies for several years past :

New Jersey Central.
Philadelphia and Reading
Lehigh Valley
Delaware, Lackawana and Western
Delaware and Hudson
Pennsylvania Coal Company.

t be eminently just. This apporti

To the trade such a combination seems eminently desirable and proper, and there are strong hopes expressed that it may be successful, yet "Shipments to the United States during the latter half of March from the Straits settlements, by sail, 250 tons; by steam, 150; together, 400 tons." These are large shipments for a fortnight. Our market has been very right. The laws of supply and demand cannot be supplyed and demand cannot be supplyed by the supersed by rest aside, and their violation. 'Shipments to the United States during the it does not seem probable that it will be for any be superseded nor set aside, and their violation will bring punishment sooner or later. Public sentiment, too, is strongly opposed to combinations of this sort, and this sentiment is strong @ 1914c. Tin Plates .- The market has been even to effect a monopoly like the Anthracite

OLD METALS, PAPER STOCK, &c. 1

There are no signs of improvement in the condition of the Old Metal, Rag and Paper Stock markets. Business still continues very quiet, and quotations remain about the same as last reported. We quote the following as the current purchasing rates :

EXPORTS

Of Hardware, Iron, Machinery, Metuls, &c., from the Port of New York, for the Week ending April 3, 1877:

ì	Dieneral Meat Thereat	Nails, kegs 135 \$610
Į	Quan. Value.	Iron, ton 1 110 8
ì	Nails, kegs 10 \$28	RR mile hwa a col
	Hdw., pkgs 11 77	Clocks, pkgs. 2 55
1	Hamburg.	Porto Rico.
1		
1	Hdw., pkga 19 1,232	Ag. imp., pkgs 3 56
1	Ag. imp., pkgs 71 5,695	
	Iron, bxs 16 250	Hayti.
1	Mf. iron, pkgs. 18 382	Cartridges, cs. 3 200 1
1	Machinery, cs. 68 3,132	Pumps, pkgs. 4 118
	Clocks, cs 127 1,684	Rifles, cs 2 800 I
	W'dmills, pks. 6 400	
ı	Bremen.	Manian
J	Dremen.	
	W'dmiffs, pks. 73 1,800	Pistols, case . 1 2,222
	Hdw., pkgs 35 1,302	Mach y., pkgs. 153 11.251
	Clocks, bxs 14 180	Mf. iron, pkgs. 61 935 1
	Ag. imp., pkgs 507 11,960	Sew. mach., cs 109 2,721
		Coal, bags 390 370
	Rotterdam.	Clocks, cs 40 922 1
	Pumps, hhds. 2 180	Iron, pcs 467 527
		Moopiron, the 3 260
	Hdw., pkgs 109 2,444 Mf. iron, pkgs. 1 290	Pumps, cs 7 208
		Revolvers case 1 384
	Ag. imp., pkgs 21 541	Ag. imp, pkgs. 6 174
ı	Antwerp.	Nails, bxs 47 99
ı	4 - 1 - 1 - 2 - 22	Arms, bxs 6 1,997
١	Ag. imp., pkgs 5 552	Dimid obill
1	Liverpool.	P'm'd sh'lls, cs 2 225
1		Hdw., pkgs 546 11,357
J	Hdw., pkgs 113 3,482	Grindstones 100 86
ı	Mach'y, pkgs., 101 2,517	Cutlery, cs 83 2,605
	Carbines, cs., 6 1,350	Tin, cs 40 405 , Lamps, pkgs 7 316
	Ag. imp., pkgs 101 6,346	Mach oll sale on or
	Lamp g'ds, pk. 49 1,751	Mach. oil, gals 99 85
	Wringers, bxs. 24 818	Cartridges, cs. 2 120
	Engine 1 320	United States of Col-
	Sew. mach., cs 33 4,025	ombia.
	Met'l goods, cs 2 483	omotic.
	Brassg'ds, box 1 156	1 Sew. mach., cs 111 4,4911
	Muskets, cs 30 7,500	Hdw., pkgs 309 11,806
	Clocks, bxs 383 5,784	Cutlery, bxs 24 709
	Car springs, cs 4 500	Clocks, bxs 21 1,579

Clocks, bxs... 21
Shot, bags... 13
Powder, kegs... 38
Mach'y, pkgs... 239
Ctridges, bxs... 24
Pit'd ware, pgs... 43
Revolvers, bxs... 4
Tinware, cs... 9
Nalls, kegs.... 139
Copper, sheets 100
Mf. iron, pkgs... 394
Lamps, pkgs... 6
Guns, case... 1 London. Cutlery, cs.... 28 460 Hdw., pkgs... 76 1,157 Nails, cs.... 16 437 Ag. imp., pkgs 13 115 Hull. Hardware, cs., 180 1,804 Ag, Imp., pkgs 106 10,447 Clocks, cs., 231 2,776 Mach'y, pkgs, 13 1,100 China. Glasgow. S'v'yrs ins't., cs 5

Mach'y, pkgs.. 5 249 Bilboa. Canada. 56 Ag. imp., pkgs 9 Lamps, case... Venezuela. Sew. mach., cs Mf. iron, pkgs. Lamps, pgks. Gas machine. Plated ware, cs Hdw., pkgs... Zinc, case.... 820 490 291 British West Indies. Firearms, pks 8 Hardware, cs... 85 Nails, kegs.... 39 125 439 159

Brazil. Hdw., pkgs . 127 2,835 Tacks, bxs 62 650 Ag .mp., pkgs 48 1,289 Pumps, pkgs . 3 191 Barrows . . . 120 200 Burners, cs . . 2 1,155 New Zealand. Ag. Imp., pkgs 107 2,525 Ag. imp., pkgs 107 Clocks, cs... 10 Wringers, cs... 3 Cryge mtls, pk 86 Hardware, cs... 396 Nails, cs.... 25 Pumps, pkgs... 15 Sew. mach., cs 16 Cutlery, cs... 14 210 165 3,000 8,885 514 1,260 1,450 850 1,155 1,095 80 240 245 Irons, cs..... Mf. iron, pkgs Clocks, cs.... Chili. Cadis. Sew. mach., cs 1

Cuba. Mach'y, pkgs. 13 Mf. iron, pkgs. 101 W'dmills, bxs. 13 Brass g'ds, cs. 1 Gas m'trs., pgs. 4 Tel. mtls., pgs. 46 Plated ware, cs. 4 Ag imp. pkgs. 6 Ag. imp., pkgs Coal, tons.... Hdw., pkgs...

IMPORTS Of Hardware, Iron, Sieel and Metals into the Port of New York, for the Week ending April 3, 1877: Hopkins E. T.
Bundles, 41
Bars, 4
Prosser Thos. & Sons,
Castings, pkgs., 95
Sanderson Geo.
Casks, 10
Woodford W. O,
Cases, 30

Cases, 30

Hardware.
Boker Hermann & Co.
Mdse. pkgs., 9
Benedlet E. Benedict E.
Rivets, cs., 6
Charles R P.
Grindstones, 397
Curley J. & Bros.
Mdsc. pkgs., 2
Friedmann& Lauterjung,
Mdsc. pkgs., 4 Order, Scrap springs, tons Mdse. pkgs., 4 Hopkins E. T. Hopkins E. T.
Plow plates, bdls., 100
Livingstone W. & F.
Grindstones, cks., 26
Moore's J. P., Sons,
Arms, cs., 1
McCoy & Co.
Mdse. pkgs., 4
Spies, Kissam & Co.
Cases, 3
Wolff H. & Co. Wolffe H. & Co. Cases, 2 Wiebusch & Hilger Hdw. Co., Cutlery and Hdw., pkgs., 14

Iron. Hopkins E. T.
Bundles, 449
Plates, 10
Merchants' Dispatch Co.
Iron tubes, 200
McCoy & Co.
Bundles, 41

Piates, 25 Pig, tons, 100 Steel. Brown William,

140 Cases, 17 Cases, 2 Bars, 6 Bundles, 60 Scrap spring, lots, 1 Metals. Ashley Morris, Zinc, cks., 20 Terne plates, bxs., 500 plates, bxs., 50 Tin plates, bxs., 50
Cort N. L.
Tin plates, bxs., 705
Grinuell, Minturn & Co.
Sheathing metal, cs., Sheathing metal, cs., 35
Hopkins E. T.
Tin plates, bxs., 2766
Middleton Co.
Lead, half bbls., 11
Metal, cks., 1
Meyer Moritz,
Lead, pigs, 3991
Naylor & Co.
Tin plates, bxs., 2250
Phelps, Dodge & Co.
Black taggers, bxs., 200

Tip, ingots, 560 Tip plates, bxs., 1826 Naylor & Co. Bars, 6152 Phelps, Dodge & Co. 5 neet, bdls., 165 Tin plates, bxs., 1826
Order,
Copper ore, bags, 39
Lead, bars, 1612
Tin, ingote, 660
Lead, pigs, 1000
Tin plates, bxs., 1609
Black taggers, bxs., 100
Without bills of Lading,
Tin, ingote, 393
Antimony, 34

PHILADELPHIA.

Paper and Scraps, 1%c.; Kentucky Bale Rope, 4c.; Oakur Junit. No. 1, 4% @ 5c.; do. No. 2, 3c.; Tarred Shaking, 1c. @ 1%c.; Grass Rope, 3c. @ 3%c. which, instead of stimulating trade, makes eavy and declining, Pennsylvania, the prime slight raily to day, but fears of another railway war is causing a good deal of uneasiness and consequent weakness in prices.

yesterday to receive a statement of the busiexperienced, the net gain amounting to \$144,increased earnings, as these decreased \$16,276 nary Rails, and \$52.50 to \$55 for light Rails. from the previous year, but the expenses for the same period were \$137,617 96 less. The are held by the Pennsylvania Railroad Company, at the present time is \$500,000, for which they have agreed to accept 5000 shares of the capital stock of the American Steamship Company at its par value of \$100 per share. From the above statement it will be seen that the average net earning of each of the four steamers has been about \$36,000 each, probably about 6 per cent, on the cost of each vessel, This is regarded as very satisfactory, and, as new ships could now be built at about twothirds the cost of those now on the line, there the company in making an addition to their fleet. An adjourned meeting will be held tomorrow, when it is expected that this matter will be the subject for consideration.

As mentioned in our late reports, the shipoutlook in this department is quite encouraging. In fact, notwithstanding all the complaints of dullness and depression, there is in a general way more work going on than for many months past, but, as we said before, the tainty of values. With the return of bright \$23 to \$26; Cast, \$15 to \$17. spring weather we hope for a more active trade, but the condition of affairs scarcely warrant very confident predictions.

Pig Iron. - The market continues in about the same condition as last week, quiet and dull, with lower figures quoted in some few instances. There is, in fact, great irregularity in but buyers are unwilling to anticipate their Coke Leaded, 14x20, \$6 to \$6.50. wants in the present weak condition of the market. The demand from outside sources with the anxiety to realize shown by many of values, even at the present low figures. The \$20, but \$19.50 would more correctly represent per cent. to the trade. the market, although \$19 is said to be the figure for some fair brands. There is a good We quote: No. 1 Foundry, \$19.50 to \$20; No. trade. 2 ditto, \$18 to \$18.50; Gray Forge, \$17.50 to 818.

Ores .- There is the usual trade movement and sales as follows : Lake Champlain-Selected (Broken), \$2.75, cash, f. o. b. Hacklebarney able for Anthracite or Bessemer purposes, \$3 per ton, f. o. b. Baumgardner's Station, Pa.

Blooms .- We make no change in quo lowing figures: Charconl Scrap Blooms, \$45 to coal Billets of superior quality, \$55 to \$62; and ably reduced. These prices are subject to nec-Bars for converting into steel, made of best essary changes without notice: Champlain Iron, \$68 to \$70. Sheet Iron Billets, 41/4 to 5x15 strictly Cold-blast Charcoal, \$64 to \$67.50. Slab Blooms for Boiler Plates, Cold-

blast Charcoal, \$57.50 to \$60.

Manufactured Iron.—The trade seems to be a good deal unsettled, and, in addition to general dullness, there is an uncertainty in regard to the future which is very disquieting.

The leading topic of interest in the Bar trade is the abandonment of the Eastern classification.

Per 24, 24, 23, 33, 34, 34, 14, 15, 12, 17, 2, 24, 24, 24, 27, 3, 34, 34, 44, 5, 5, 54, and 6 inches wide, and from \(\frac{1}{2} \) inches wide \(be a good deal unsettled, and, in addition to tion by one of the most prominent manufacturing firms in this city. The list issued by the firm will be found below. It has been well understood by the trade for months past that the classification was only one of form, and that, although the base price might be adhered to, cutting on extras was the rule rather than the exception. This innovation will, no doubt, cause some difficulty in the trade, for the time being, but the general opinion seems to be that so long as the classification was merely one of form, it is as well to abandon it altogether. The demand for Bars is fair. No special activity can be noted, although there is some litting the improvement, and the tendency seems to be $\begin{bmatrix} \frac{1}{2}x^2 & \frac{1}{2} & \frac{1}{2}x & \frac{1}{2} & \frac{1}{2}x &$ The demand for Bars is fair. No special acin that direction. Plate and Tank Iron-Continue in fair

demand, and the mills are all moderately emdemand, and the mills are all moderately employed. The complaint is chiefly in regard to prices, which are said to be very unremunerative.

Sheet from Lamoving a little more freely.

the purpose of arranging some plan by which buyers more cautious and determined to buy uniformity in prices will be maintained. There sparingly. The stock market, too, has been appears to be a tacit understanding already that \$51, at tide, should be the lowest figure, favorite of Philadelphiars, having declined 5 but when a first class buyer appears with cash per cent. during the week, and is now quoted in hand and orders on the books are diminish Danish West Indies. Nails kees 135 \$610 \$38 against its par value of \$50. There is a lng, there is a strong inducement to sell regardless of "understandings." Still, if some arrangement can be made, which will be equally fair to all, it is very desirable that it should be The annual meeting of the stockholders of done, as the capacity for production is greatly the American Steamship Company was held in excess of the demand. Any method that will prevent a ruinous competition will be ness for 1876. This appears to have been the most satisfactory year which the company have been at about \$49, at n:ll, with one sale of 1000 tons 35 lb. Rails for narrow gauge at \$55, at 914.57. This, however, is not on account of mills. We quote \$48 to \$49, at mills, for ordi-

Iron Rails .- Business continues dull, and we have but few sales to note. There is still a floating debt of the company, notes for which strong desire on the part of both buyers and sellers to do business, but as there is little money to be seen in the transaction not much progress is made. There are orders in the market for several thousand tons, and if terms of payment can be arranged we shall soon have some business to report. In the meantime, we quote at \$33 to \$37, cash, at mills, according to quality and terms of payment.

Spikes .- There is a fair demand, but prices are a shade easier, and for large lets some concessions would be made. We quote: Railway Spikes, \$2.25 to \$2.50, and Mining Spikes, 4 to appears to be sufficient inducement to warrant 41/4 by 1/2, 23/4c; 4 to 41/4 by 7 16, 3c.; 31/4 to 4

Old Rails .- The market is weak under larger offerings, and it would be difficult to place any round lots unless at a further decline. Sales are reported at \$20 to \$21, which yards are all moderately employed, and the is about a fair quotation, although we hear of one sale of extra quality at a higher figure. The market is quiet and easy at \$30 to \$21.

Scrap Iron .- There is no change to note since our last. Good Selected qualities are scarce, and realize full quotations, while other chief element of disturbance is in the uncer- descriptions are inactive. We quote: Wrought,

Nails .- The demand is fairly active, and prices unchanged, but it is understood that outside parties are shading. We quote \$2.75 as the nominal trade price.

Tin Plates .- The market is quiet and steady. We quote, jobbing lots: I. C., 10x14, Best Charcoal Bright, \$7 50 to \$8; I. X., 10x14, prices. Some special brands are held firmly at \$9.75 to \$10.25; Best Charco I Leaded, 28x20, full quotations, while others are pressed on the \$14 to \$14.50; good Charcoal Leaded, \$13.50 to market, and to effect sales extremely low \$13.75; other good brands, \$12.50 to \$13.25; figures are accepted. The demand is moderate, good Bright Tin for Cans, &c., \$6:50 to \$7:25;

Lead .- Foreign Pig is dull at 6%c. to 6%c., gold; about 50 tons sold within these prices. seems to be somewhat better than locally, but Domestic is dull; about 400 tons have been sold at 61/2e., currency, immediate delivery. the companies, there is no great confidence in The main part of the stock is held at 6%c. to 6%c. Manufactured is stendy at 7%c. for Bar nominal quotation for No. 1 Foundry is still Lead, 9c. for Pipe, and 9%c. for Sucet, less 10

Shot .- Drop Shot, 25 lb. bags, 91/4e.; do., 5 lb. bags, 101/c.; Buckshot, 25 lb. bags, 101/c.; deal of firmness in Forge Irons, and outside do., 5 lb. bags, 111/4c.; Conical Balls, 25 lb. quotations are realized for good brands, but in bags, 10c. per lb., net; Bar Lead, 5 oz., 1/4 lb. certain cases much higher figures are quoted. and 1 lb. bars, 7%c., less 10 per cent. to the

Old Metals .- Mukat steady at following uotations: Heavy Old Copper, 17c. to 171/2c.; Light Tinned Copper, 151/4e.; Copper Bottoms, 15c.; Heavy Red Brass, 141/2c.; Heavy Yel-Lump Ore, \$4 f. o. b.; Furnace Ore, \$3.25, f. o. b. low Brass, 10/4c.; Heavy Clean Pipe Lead, New Jersey Magnetics—Blue Bessemer Select 51/4c.; Junk Lead, 51/4c.; Tea Lead, Light Paper, 51/c.; Tea Lead, Heavy Paper, 51/c.; New Zinc "Hoff"; for Foundry Metal, \$3.75 to \$4, f. Clippings, 4½c.; Old Sheet Zinc, 4½c.; Yeloo, b. Port Oram; Magnetic Lancaster Ore, suit-low Brass Turnings, 9½c. to 10½c.; Plumblow Brass Turnings, 91/c. to 101/c.; Plumb ers' Lead Joints, 61/2c.

James Rowland & Co., Philadelphia, have issued, under date of 31st ultimo, the following tations. A good demand is reported at the fol- revised table of prices for Refined Bar and Band Iron. It will be noticed that the rates \$47; Charcoal Ore Blooms, \$40 to \$42; Char- for some of the extra sizes have been consider-

We are now quoting 2-2c. per lb. as our base price. Bar Iron-Anvil Brand. Flat Bars, Ordinary Sizes.

Rounds-Anvil Brand.

Ordinary Sizes. 9-16, %, 11-16, 47-64, ½, 13-16, 2, 15-16, 1, 11-16, 1½, 13-16, 1½, 15-16, 1½, 17-16, 1½, 19-16, 1½, 11-16, 1¾ Squares Anvil-Brand. Ordinary Sizes.

9-16, %, 11-16, 34, 13-16, 74, 15-16, 1, 11-16, 114, 13-16

Rounds and Squares-Anril Brand. Extra Sizes.

Extra per lb

provement either in prices or demand, and some of the works experience a difficulty in obtaining orders sufficient to keep them going."

Lead.—Since our last report between 100 and 150 tons more of Common Domestic have been taken at 6½c., currency. Since then the steamer has arrived with 270 tons more, which have been obtainable on the dock at 6½c., currency, but, not meeting with a purchaser, have gone into store. Should anybody desire to buy larger lots in this market just at present, he would have to pay as much as 6½c., currency, probably, as they are still under firm control.

Stock, 3½c.; Newspaper Stock, 2½c.; Waste

0.16+2-20 or No	19		
9-16x5-32 and 3-16			
k #3.39 or No. 19			
6cx 5c and 5-32			
86 x3-16 and 7-32			
34x3-16 and 7-32.			
7/ +2.16 and 7.30			
1x & and 7-82			
14x4			
Half	Round	l = An	vil Brand.
1/ inch and 0.16			
11.16 and 3/			************
78, 11-10 and 23	ch		
Me 10-10 and 1 in	Bill of L	nan d	nvil Brand.
%x%, 3-16 and 8.			
% x9, 10, 11 and 1	40		
17 90 17 18 and 1	10		
17-343 %	7.16		
0.16w1/ and 0.99	1-10.		
0.16vK.16 M and	7.16		
%x%	0-20		
6 v2.16 8 9	******		
6 x 10, 11 and 12			
% x5.16, 11.89, %	7-16 ar	nd 36	
11-16+14	1-40 44	res 58	
11.16x5.16 34 7.1	S and 3	4	
%×3-16	O 40004 /		
3c x 8. 9. 10			
3 x11 and 19			
%x % and 5-16			
%x3, 13-32, 7-16,	% and	%	
13-16x % and 5-16.			
%x3-16			
%x8, 9, 10, 11 an	d 12		
%x% and 5-16			
%x%, 7-16, %, 9-	16 and	78	
15-16x% and 5-16			
15-10x%, 7-10, %	and 9-	10	
1x3-10	10		
1x8, 9, 10, 11 and	120		
78 40-10 and 1-00.			
			-Anvil Brand.
	in. the	cknes	5.
1 7-32x 1/2 to 1	16	55	
1 13-32x% to 1% 1 19-82x% to 1%	68	66	
1 19-82x 1/2 to 11/4	6.5	44	
1 31-32x% to 1%	+6	66	
8 5-16x% to 1% 2 5-32x% to 1%	0.6	66	
		Ameri	U Daned
H00	p tron-	-4760	l Brand.
			Extra per lb. ordinary ba
x Nos. 13 and 1	1		
T No. 15 to 19	******		
x No. 15 to 19 x 13 to 16 and 1% x No.			**************

An assortment of sizes constantly in stock,

Office of The Iron Age. 20 Fifth Avenue, разгиван, April 8, 1877. } market is not as favorable to holders as it was a week ago, owing to a reduction on Nalls and a very general unsatisfactory and unremunerative condition of the market for the products. Consumers claim, and with good reason, too, that raw Iron is higher relatively than the products, while producers, on the other hand, allege that current rates for the former do not cover actual cost of production. While there is a very fair business in the aggregate, the inquiry is chiefly for small lots, and, though there as no scarcity of Cold-short and Neutral Irons, good Red-shorts are in light supply and held firmly at full prices. Bituminous Coal and Coke Irons are quoted at \$24, 4 months, for No. 1 Foundry; \$22.50 to \$23 for No. 2; and \$21 to \$22 for Neutral to Red-short Gray Forge.

Manufactured Iron.—Business is not panning out as well as expected. The outlook is not as promising as it was a month ago, and manufacturers are feeling very much discouraged in consequence. Orders are still obtainable at bottom prices, yielding a loss of from \$3 to \$5 per ton to the maker, but, as might be expected, makers are unwilling to book orders with an actual loss staring them in the face. An inferior quality of Iron, made out of poor pig or old rails, could be furnished, and possibly yield a small profit at the rates now current, but our manufacturers generally are so jealous of their reputation that rather than make poor stock they will shut down and wait for buyers to learn, as some of them have already, that good iron is cheaper in the long run than poor stock at two or even three-tenths of a cent per pound more. Already some buyers, in sending forward orders, are particular to specify that they do not want any iron made out of old rails, and the indications are that the day is not far distant when first-class finished irons will bring a still greater premium, as like good Pig Iron they will be getting scarcer. The former may be quoted at

Window Glass .- Trade continues back ward, and the only feature worthy of notice is the probability of a general strike, as the gath erers demand an advance on present rates of from 371/4 to 50 per cent., to which manufac rers, it is almost certain, will not accede.

BOSTON.

BOSTON.

MARCH 31.—Pog continues easy, and prices tend downward, though nominally unchanged. We quote \$23.50 to \$24 for No. 1, \$23 for No. 2 and \$22 to \$23 for Gray Forge. Scotch Pig is dull. We quote: Coltness, \$28; Glengarnock, \$26.50; and Eglinton, \$26. Bar is dull, quoting \$47 to \$48 for Refined, and \$38 to \$39 for Common. Nails are in light demand. Rails have quieted down. Coppor is quiet, quoting at 19% c to 19% c. for Lake Ingot. The saies have been very smail. For Manufactured we quote: New Sheathing, 31c. to 32c.; Boits and Braziers, 32c. to 32% c.; Yellow Metal Boits, 26c. to 26% c.; do. Sheathing, 21½ c. Lead continues in steady demand at about unchanged prices. The foreign markets are easy. We quote: Pig. % c. to 6% c.; Currency, for Domestic; Sheet, 9% c.; Pipe, 9c.; Tin Lined Pipe, 16% c.; Bar Lead, 8% c., less usual trade or 10 per cent. discount. Antimony is quiet at 13c. to 13% c., gold, for Boston spot lots, and Spelter is easy, closing at \$6.50 on the spot for 10 ton lots. Tin is quiet, and prices are nominally unchanged. We quote: Stratis, 17% c.; Banca, 19% c. to 20% c.; Refined English, 17c. to 17% c., gold. We quote Plates: Charcoal I. C., \$7 to \$7.50; Coke, \$6.10 to \$6.25; and Terne at \$6.75 to \$7.25, gold.—Commercial Bulletin.

Messrs, Spooner & Collins, Iron commission Messrs, SPONER & COLLINS, Iron commission agents, 217 North Third street, St. Louis, underdate of March 29, report the Iron market as follows: Our market the past week has been very quiet. Prices remain unchanged, and future prospects not very encouraging. We have had hopes of "better times," but they seem to be a "long ways off" at the present time.

1% and 1% A No. It and lo	The state of the s
1% x No. 17 '50c	CHARCOAL.
Band Iron-Anvil Brand.	Missouri No. 1 Foundry \$23.00 @ 25.00-4 mos.
1%, 1%, 1%, 1%, 1% x3-16 to 12 Gauge '20c	" No. 2 Foundry 22 '00 (6 23 '00-4 mos.
1%, 1%, 1% x18 to No. 16 Gauge 40c	" Gray Mill 22.00 @ 23.00-4 mos.
2 and 21 x 3-16 to No. 12 Gauge 20c	Hanging Rock No. 1 F'dry 25:00 @ 26:00-4 mos.
2 and 2½x13 to No. 16 Gauge	No. 2 F'dry 28:50 @ 24:00-4 mos.
	Gray Mill 23°00 @ 24'00-4 mos.
2%, 2%, 3, 8%, 3%, 8% and 4 in. x3-16 to No. 12	Tennessee No. 1 Foundry 23.50 @ 24.00-4 mos.
Gauge	No. 2 Foundry 22:50 @ 23:00-4 mos.
3%, 3%, 3, 3%, 3%, 3% and 4 in. x13 to No. 10	" Gray Mill 22 50 @ 23 00—4 mos.
Gauge 35c	
4%, 4%, 5, 5%, 6 and 6% x3-16 to No. 12 Gauge. '15c	COKE.
7, 8, 8 x3-16 to No. 10 Gauge '15c	Alice H. R. Ex. A No. 1 F'dry. \$26.50 @ -4 mos.
Extra.	" " A No. 1 F'dry 25.50 @ -4 mos.
Band Iron, cut to given lengths 2c	" B No. 1 F'dry 24'50 @ -4 mos.
Bar Iron, "10 over 20 feet '2c	" No. 2 F'dry 23.50 @ -4 mos.
" over 20 feet '3c	" " Mill 23.50 @ -4 mos.
Skelp Iron, for Gas Pipes, a specialty.	" No. 1 Silver Grav. 24:50 @ -4 mos.
Stone Saw Blades.	Chattanooga, Tenn., No. 1
Rivet Iron.	Foundry 25.00 @ -4 mos.
Terms-Net cash. F. o. b. at Philadelphia. Par	Chattanooga, Tenn., No. 2
Funds.	Foundry
An assortment of sizes constantly in stock.	Chattanooga, Tenn., Forge 22.50 @ -4 mos.
	Chattanooga, Tenn., Forge 22.50 @ —4 mos.
	and Motiled \$1.00 @ -4 mos.
PITTSBURGH.	STONE COAL.
D. W A. W T	Missouri No. 1 Foundry \$25.00 @ 26.00-4 mos.
Office of The Iron Age, 20 Fifth Avenue, t	" No. 2 Foundry 23 00 @ 24 00-4 mos.
Pittsburen, April 8, 1877.	" Gray Mill 22.00 @ 28.00-4 mos.
Pig Iron.—The general position of the	" White and Mottled 21.00 @ 22.00-4 mos.
market is not as favorable to holders as it was	COLD BLAST CHARCOAL—All Numbers.
a week ago, owing to a reduction on Nails and	Hanging Rock
a very general unsatisfactory and unremunera-	Tennessee 30.00 @ 33.09-4 mos.
	Kentucky 30'00 @ 33'00-4 mos.
tive condition of the market for the products.	Missouri 28.00 @ 30.00-4 mos.
Consumers claim, and with good reason, too,	Georgia 28.00 @ 30.00—4 mos
	Alabama 28.00 @ 30.00—4 mos.
that raw Iron is higher relatively than the prod-	Assorted Bar Iron @ 2% rates.
meta mbile producers on the other hand al-	No. 1 Wrought Scrap '95 @

·95 @

LOUISVILLE. Messrs. GEO. H. HULL & Co., under date of April 1, write us as follows: The market is quiet. Buyers complain of small trade, and are not disposed to stock up. We revise quotations as below. The usual time, 4 months, is allowed on the quotations below:

ı	FOUNDRY IRONS.		
	No. 1 Hanging Rock, Charcoal	28.00 (24.0 2 21.0
	Coke. No. 1 Southern, Stonecoal and Coke. No. 2 " American Scotch". Silver Gray.	21.00 @ 20.50 @ 23.00 @ 19.00 @	21.5 21.0 23.5
	MILL IRONS.		
	No. 1 Charcoal, Cold-short and Neut'l. No. 1 Stonecoal and Coke, Cold-short	50.00 ¢	
	and Neutral	30.00 G	\$ 30.2
	and Neutral	19:00 @	A 19·5
	No. 1 Missouri and Indiana Red-short. White and Mottled, Cold-short and	24.00 @	24.5
ĺ	Neutral	16.00 0	₿ 17·0
1	CAR WHEEL AND MALLEABLE IS	ONS.	
	Hanging Rock, Cold-blast	28:00 @ 28:00 @	\$ 85.0
	CINCINNATI		

CINCINNATI.

Messrs. L. R. HULL & Co., under date of March 31, write us as follows: Pio Irox.—We are able to report a decidedly improved demand, the market being quite active. Some considerable sales have been made, and the total amount that has changed hands of Mill and Foundry Iron is large. We note in particular a sale of 2000 tons Foundry Iron. Prices for all grades remain about the same as last reported:

ing scarcer. The former may be qualifyed annot be a second quality cannot be quoted above 1.75c. to 1.80c.

Nails.—At the meeting of the Western Association in this city last week prices were reduced 25c. per keg. The ruling combination rates at present are \$2.50, 60 days, for 200 kegs and upward, and \$2.50, 60 days, for less than 200 kegs. Trade is dull; unusually so, for this season of the year, and then some makers, outside of the combination, have been cutting under combination rates.

The second quality cannot be ported:

Hanging Rock No. 1, Charcolle 22.50 (22.50—4 mos. No. 1, Coke. 22.00 (22.50—4 mos. No. 1, Stone-coal No. 1, Stone-coal No. 1, Stone-coal No. 1, Stone-coal No. 1, Coke. 22.00 (22.50—4 mos. No. 2, "2.00 (22.50—4 mos. No. 2, "2.00 (22.50—4 mos. No. 2, "2.00 (22.50—4 mos. No. 1, Coke. 23.50 (22.

was decided to make no change either in the caid or discounts for the present. Business are being made from Pittsburgh, but the high price of freights have prohibited any shipment. The demand from Southern foundries is on the ness of the season.

COKE.

	No. 1 Foundry. 200 @ 21 00 No. 2 Foundry. 18 00 @ 18 50 Gray Forge 18 50 @ 17 00 White and Mottled 15 50 @ 16 60
1	White and Mottled 15.50 @ 16.00
١	HOT-BLAST CHARCOAL.
	No. 1 Foundry, extra \$21.00 @ 22.50 No. 1 Foundry 19.50 @ 30.50 No. 2 Foundry 18.00 @ 18.50 Gray Forge 17.40 @ — White and Mottled 16.50 @ —
1	COLD-BLAST CHARCOAL.
-	Car Wheel Metal \$23.06 @ 28.00 Forge Metal 30.00 @ 35.00 Muck Bar 31.06 @ 35.00 Old Car Wheels 17.56 @ - Old Kails 17.56 @ - Brown Hematite Ore, 50 to 56 per cent. 20.00 @ 25.00 Ped Fossilliterous Ore, 50 to 56 per cent. 20.00 @ 25.00 Tender of the cent. 20.00 @ 25.00 Cent. per ton 18.00 @ 20.00

RICHMOND.

Mr. Asa Snyder, Iron Merchant and Furnace Agent, Richmond, Va., writes as follows under date of March 31: The receipts of Charcoal Irons are nominal, and the demand is in keep-ing. Quotations remain as previously:

Virginia cold-blast Charcoal Pig Irons, \$28.00 @ 35.00 Virginia hot-blast Charcoal Pig Irons, \$28.00 @ 38.00 Va. hot blast Chare Pig Iron, No. 1 ex. 24.00 @ 25.00 Va. hot blast Coke Pig Iron, No. 2 ex. 29.00 @ 29.00 Va. Va. 44. 45. No. 3 ex. 19.00 @ 20.00

BALTIMORE.

Messrs. Wyeth & Brother, Iron and Steel merchants, 46 and 48 South Charles street, report us the following prices under date of April 3: The past week has not developed any special change in this market. Trade has ruled rather more quier, but with strong indications of early improvement in this respect. We quote the market quiet, but firm at annexed figures:

AMERICAN REPIMBD BAR IRON

1 to 6 wide by ½ to 1 thick... 2·15 to 2½c. 2 D

Round and square, ordinary sizes, from
½ to 2 inclusive... 2·15 to 2½c... 4

Hoop Iron, 1½ wide and upward... 5½ to 3½c... 4

Hoop Iron, 1½ wide and upward... 5½ to 3½c... 4

Horse Shoe Iron ½ to 4 lin. wide... 3 to 3½c... 4

Horse Shoe Iron ½ to 1 wide by ½ to ½

thick... 3½ to 4c... 4

Norway Nail Rods... 6 to 6½c... 4

Horse Shoe Iron ½ to 1 wide by ½ to ½

thick... 3½ to 4c... 4

Norway Nail Rods... 6 to 6½c... 4

Balek Diamond Cast Steel, Flats, Squares
and Octazon, ordinary sizes ... 14½ to 15c... 4

Machinery Steel... 8to 9c... 4

Machinery Steel... 7½ to 8c... 4

Homogeneous Steel Plate... 3½ to 9c... 4

Perkins' Horse Shoes, per keg of 100 lbs... 43°32½

Male Shoes 1 2½ to 3c.

Coumon Horse Nails, from 14c. to 18c. per pound.

10 9 8 7 6

Putnam Horse Nails, 23 24 25 26 28c. per 25.

Globe Horse Nails... 23 24 25 26 28c. per 25.

Messrs. R. C. Hofffman & Co., Iron and com-AWERICAN REFINED BAR IRON

Messrs. R. C. Hoffman & Co., Iron and commission merchants, No. 23 South Frederick street, report the Pig Iron market as follows, under date of April 2: The Iron market remains without any material change, with a moderate demand. We quote prices as follows: Review of the British Iron, Steel, Metal

Baltimore	Char	coal									 \$29.0	0 0	0 2	31.00
Virginia	64				 						 28.0	00	4 :	32.00
Anthracite	No.	1									. 21.0	0 @	0 :	22.00
66	No.	2									. 30.0	00	1	21.00
4.0	No.													20.00
White and	Mott	led									16.0	0 @	3	17.00

CLEVELAND.

Messrs. C. E. BINGHAM & Co., 25 West Mein street, under date of April 3, quote the Iron market as follows, 4 mos. time: TOUNDRY IRON. No. 1 Lake Superior Charcoal.....

No. 1 Anthra	cite			. 31.60—1 m.
No. 2 "				. 23·08—4 m.
No. 1 Bitumi	nous			
No. 2 "				. 22.00-4 m.
No. 1 Cherry	Valley Ar	n. Sco	teh	24.00-4 m.
H-1	44	6.6		
No. 2.	6.6	6.6		. 22·00-4 m.
No. 1 Massill	on			24.00-4 m.
B-1				23·00-4 m.
No. 2				
CAR	WHEEL AN	D MAL	LEABLE 1	RON.
No. 3 Lake S	uperior Ch	arcoal.		\$26.00-4 m.
No. 4 **	64			27.00-4 m.
Nos. 5 & 6 "	44		*******	27.00-4 m.
	BESSE	MER I	RON.	
Nos. 1 and 2	Lake Super	rior Ch	arcoal	\$26.00-4 m.
	FOR	GE IRC	N.	
No. 1 Gray				.\$21.00-1 m.
White and M	ottled			19.00-4 m.
	-	-		

FOREIGN.

FRANCE.

FRANCE.

(Moniteur des intereis Maieriels).

Paris, March 18, 1877.— Metals.—The general situation has undergone little change during the week. Business is dul, and there are complaints from a great many quarters. Copper.—The week has been an eventful one, inasmuch as our rollers have taken 6900 tons Chill Bars at Havre, understood to be deliverable in lois of 1000 tons per month at the average price of Bars each consecutive month. Though quiescent here, we have remained tolerably firm, and quote as follows: Chill Bars, 191 to 192 francs; Common, ditto, 185 to 187; Ingots, 195 to 196; Beat Selected, 198, and pure Cerocoro Ore, 190 to 192. Havre is steady at the following rates: First brands, quiescont here, we have remained tolerary and, and quote as follows: Chili Bars, 191 to 192 francs; Common, ditto, 185 to 187; Ingots, 195 to 196; Best Selcted, 198, and pure Cerocro Ore, 190 to 192. Havre is steady at the following rates: First brands, Chili Bars, 190 to 19125, Paris conditions; good current, ditto, 180 25 to 187 50, and Lota and Urmeneta, 1837 5to 185. Marsellles has been uniformly inactive at ensuing figures: Spanish in slabs, 175 to 180; Best Tokat, 180 to 185; small Refued Ingots, 190; Shesibing, 225; Bolts, 230, and Yellow Metal Sheathing, 216. The —There is not much pressure to sell at present low prices, and this, to a certain degree, sustains the market, notwithstanding the reluctance of dealers and consumers to anticipate wants in the least. Taken as a whole, the situation is one of uninterrupted apathy. No change can be advised from here, and we quote as heretofere: Banca at Havre or Paris, 194 frances the 100 kilos; Billiton, 191; Straits, 190; Australian, 190, and English at Havre or Rouen, 190. Nothing of special importance is reported from Marselles, where the following rates still prevail: Banca, 300; Straits, 195; Billiton, 185 to 190, and English Refined, 390. Lead.—The improved demand and greater firmness noticeable in England have not yet been transferred to the French markets, and we can report but a quiet market at this center, quoting as heretofore the various sorts between 52*25 and 53 francs the 100 kilos. Havre remains inactive at 54*50. Marsellles without change. Speller.—In response to a freeh giving way of 2.6 to 5/ per cwt., at London, in Spelter and Sheet Zinc, the attitude of the metal in France remains one of extreme listlessness. We quote the same nominally 54 to 54*50 francs. Havre quote the same nominally 54 to 54*50 francs. Havre quote the same nominally 54 to 54*50 francs. Have quote the same nominally 54 to 54*50 francs. In this market. There is greater animation in the Haute Marne in Coke Iron, Sheet, and in machinery, Chains are wanted, but wire and naii

tendency, if anything, is an upward one. The orders received are mostly such as are usually dropping in on the approach of spring. Most of the dealers carry but light stocks, and begin to replenish them by degrees. Some iron masters persist in taking a rather gloomy view of the future, but we cannot agree with them. It is fair to expect that Belgian Iron industry will have a fair share in the usual run of orders from abroad received during the spring months. Add thereto the requirements of the government, which will be considerable, and there will be in all probability plenty of work on hand. Although some people pretend that the reign of from Pernambuce, Brazil for 13,000 tons. A French company competed for it, but it has been secured by a Belgian concern. On the other hand, 500 Iron freight cars for Spain have been adjudicated in favor of French bidders. The Steel works of Bochum, for the same line, will furnish 600 tons of Steel Rails. Some important adjudications will soon come off in this city for railroad material for our State lines. At Sarbruck, on the 24th proximo, 27 locomotives with tenders will be adjudicated upon. Coalis executions of the company competed for the same line, will furnish 600 tons of Steel Rails.

GERMANY.

(Borsenhalle).

Hambubg, March 17. 1877.—Metals.—Copper.—Transactions in this metal have been on but a moderate scale, and prices have fluctuated very little. At Berlin the market is, however, firmer—good qualities Eaglish and Australian commanding 79 to 84 marks the 50 kilos, while Mansfield is worth 81:50 to 82. At Stett'in, English Tough Cake, 80. 7in.—The German markets have been rather firmer, that of Berlin in particular, Banca being quoted there 78 to 78:20, and English 76:50 to 77. Nothing has transpired here, and we leave quotations unaltered. There has been no increase of activity in our Lead markets. At Berlin, Tarnowitz, Bartz and Saxonian are worth 21 to 21:50 the 50 kilos. At Stettin, Spanshis and Saxonian are controlled the 78:50 for 50 kilos. At Stettin, Spanshis 28. Spelter.—Actually nothing has transpired in the German markets during the week, and there is no change in prices. Berlin quotes good qualities Silesian 21:30 to 21:50 marks the 50 kilos. At Stettin the price fluctuates between 22:50 and 23:50, according to brand. Breelau is well sustained, but Inactive. Our own market is flat at 21:60 on the spot, and 21:50 to arrive. (Borsenhalle).

HOLLAND.

HOLLAND.

(Koch & Viverboom)

ROTTERDAM, March 17, 1877.—Tin.—The Dutch markets are excessively quiet. Most of the holders of available Tin refuse to sell at ruling rates. On the other hand purchasers do not abound; Banca is now held at 433½ to 43½ guilders, but to be delivered from the impending sale it might probably be held at 43. Builton on the spot is quoted 43½, but to arrive some small lots have changed hands at 42.

EAST INDIES.

EAST INDIES.

(Gigilian, Wood & Co.)

Singapore, Feb. 15, 1877.—Tin.—Supplies have been moderate; the market was weak at \$10.50 per picul until two days ago, when news of an advance it London brought out buyers, and there are now more buyers than sellers at our quotation. The shipments going forward to the United States of America are very moderate. There have been no charters for the United States during the past fortnight. The Auguste is loading for New York. The charter of the Moitke has been cancelled, and the Hera has been taken up instead on secret terms. Exchange has declined to 4.3% for first-class 6 months' sight credit Grafts on London.

Our English Letter.

and Hardware Trades.

(From our Regular Correspondent.) SHEFFIELD, Eng., March 19, 1877. TRADE PROSPECTS

are, for the time being, rather brighter, in consonance with the increased power of the sun and the decidedly favorable turn which Eastern politics have taken within the past few days. It is now believed that war on the Eastern diffi culty will be evaded for the present, inasmuch as the Russian special envoy, Ignatieff, is reported to have been successful in his mission at all the European capitals, including London. Thus, externally, we have better prospects, while at home there are many things which are inductive arguments in support of the proposition that things will shortly mend. It is, at all events, a fact that all the steel rail mills in the country are becoming not only well employed but busy, so that the price of those articles is just now rather inclined to harden. About £7 per ton is the average quotation for ordinary sections, while a few lots are being done at less money. The fact is that the British traders and manufacturers are such inveter ate business men that they "must be doing' at any price and at any risk. I know of one particularly prominent case in which a certain firm is paying £9. 10/ per ton for pig iron, contracted for in the high price days of 1872-'73, which is being "put through the mill" and sold as rails at £7. 10/ per ton! I can assure your readers that this is a fact, and that all forts to get rid of the "old man" of e price have had no effect with the smelters, who seem to know particularly well when they have a good thing on hand. Of the iron trade proper I cannot speak so cheerfully, yet I know that manufactured iron is selling more freely in many directions. Merchant iron, on the other hand, is neglected and will not move off until prices come down. Hardwares, too, are rather quiet and will not change prior to the advent of the summer trade in April or May, Cutlery remains especially dull, and I am told that the stocks here are exceptionally heavy. Some will doubtless soon be realized. THE IRON AND STEEL INSTITUTE'S

sate and payard, and \$2-90, 60 days, for least than 200 kegs. Trade is dull; unusually so, for this season of the year, and then some makers, outside of the combination, have been cutting under combination rates.

Horse and Mule Shoes continue dull but unchanged. One hundred keg lost, \$5-90 for former, and \$4-90 for later.

Steel.—Nothing new to record. Business continues fairly active, mills are all well supplied with orders, and the indications are at that there will be no dearth of orders for some time to come. Unlike the front trade, the continued one. Unlike the front trade, the continued one. Unlike the front trade, the continued of the continued of the first trade of the first trad

Water-bearing Upper Strata;" Mr. Pearce, "On the Manufacture of West Yorkshire Iron."

THE SUEZ CANAL.

From London to Suez is a long stride, and would be remarkable were we not now a people to whom the word surprise is unknown. I allude to Suez in order to call attention to the fact that last year the aggregate tonnage which passed through the canal was 2,095,870 tons, of which total 1,578,243 tons were under the British flar. Of the remainder, 169,135 was French, 102,054 tons Dutch, and Italy, 69,998 tons. These figures are put forward by some of the papers as a sufficient reason for keeping Russia out of Turkey.

STEEL VERSUS IRON.

In lecturing last week at the Royal Institute, Mr. Bramwell, F. R. S., past president of the Institute of Mechanical Engineers, dwelt at some length on the relative merits of the Bessesome length on the relative merits of the Bessemer and Stemens processes, concluding by saying that it is undoubted that by the Bessemer process, when conducted by skilled men who thoroughly understand their business, irustworthy results can be obtained, but by the Siemens process it requires very great cleverness to obtain results that are not trustworthy! He illustrated the latter remark by stating that out of 14,000 samples made for the Admiralty at the Landore Works not one has failed to undergo the severe prescribed tests. In making his bow to the audience, Mr. Bramwell said he believed steel would supersede iron for almost everysteel would supersede iron for almost every-thing except the forge work of common black-smiths. The future of steel would practically be the occupation of the whole province now filled by steel and wrought iron.

FAILURES

railures
we still have, albeit not numerously nor of great proportions. The most noteworthy ones of the week have been that of a Belfast linen firm for £30,000, of a Hallfax merchant for £25,000, and of Mr. George Eginton, of the Deeptield Iron Company, Staffordshire, whose debts are said to be between £16,000 and £17,000. In the last case the first meeting of creditors will be held at Birmingham on April 5th. Depression of trade is the prime cause of the stoppage which may affect other houses in the same district.

THE WEEK'S EXPLOSIONS

have been somewhat more promising, both in point of number and as to results. I don't refer to them as news so much as to show the the terrible consequences of all sorts of people to handle in any carthly way they like the most destructive explosives which chemistry has been able to evoke. Thus at Whitehaven two men were literally blown to pieces by an explosion of dynamite which had been placed in their charge for blasting purposes. They were so horribly mutilated that the largest piece of either body was the breastbone. Then, again, at the Balincollig (Ireland) powder mills a shed was demolished and a man killed by an unexpected detonation. At Huddersfield two children were killed by the explosion of a petroleum lamp; while at Brighton a steam road roller burst a gas pipe, which allowed its gas to escape into a shop where an explosion took place in due course, and to such a tune that the damage amounted to several thousand pounds.

THE CAPE TOWN EXHIBITION

will, I believe, contain a rather large assortment of British manufactures, despite the very considerable sceering at the venture which has been indulged in by a section of the British press. The last consignment left. England on March 8d. Sir Barke Frere, the new governor of the Cape, will open the exhibition if he should reach the colony in time for that ceremony. There is no doubt that the Cape is destined to be one of our best markets in the immediate future. There is some talk of a cable being laid between Cape Town and Madeira—one of the most desirable projects of the kind ever advocated.

SCOTCH PIG IRON

												1	No. 1.	N	0. 3
G. M. B., at	Glasgow									۰			55/6		52/
Gartsherrie,	44						۰			۰	۰		61/8		54/3
Coltness,	+4												64/6		54/
Summerlee,	0.9												60/6		54/
Langloan.	4.6												62/6		55/
Carnbroe,	9.6												57/		58/
Calder, at Po	ort Dund	85	١,										62/		53/
Glengarnock		108	18	a	n					è			59/6		54/
Eginton.	6.5					۰							55/6		52/
Dalmellingto	D. **											,	55/6		52/6
Shotts, at Le	ith							٠					62/		55/
Kinneil at I	so'ness						۰	۰			a		56/6		53/
													_		

The prices of William Colvin & Co. and John E. Swan & Bros. are similar to these. The prices current of the latter house state that there are now 119 furnaces in blast in Scotland, capable of producing 182 tors per furnace per week.

SHIPMENTS FROM THE CLYDE

ist week were on a fairly good scale and included 716 tons of cast fron pipes, worth £4005, for Melbourne; 753 tons of pipes, worth £6128 and £22 tons of railway sleepers, worth £1800, for Bombay; £3621 worth of bar fron for Singapore; £5820 worth of sugar making machinery for Honolulu, beside £4000 of machinery, £500 of pipes, £3800 of castings and £4000 miscellaneous goods for the East and West Indies and the Mediterranean markets. Sectiand seems to get a good share of this class Scotland seems to get a good share of this class of orders, and, I suppose, always will while so many "brother Scots" are at the head of con-cerns all over the world.

above the 1871 prices, and 5:33 per cent. above the South Yorkshire miners. In cutlery there is very little improvement, your market being still very flat. Many of the local houses are beginning to stop stocking.

your market being still very flat. Many of the local houses are beginning to stop stocking.

FOREIGN COMPETITION AGAIN.

During the past Iew days renewed and serious att. atton has been drawn to the question of foreign competition at home and abroad, and statements have been made in public and private which are certainly calculated to induce reflection in the minds of all locally concerned. To begin with, at the annual meeting of the Scissors Manufacturers' Association, held on Monday, an animated and interesting discussion took place on the remarkable success with which German scissors are everywhere competing with our own. Not only are they carrying all before them in the distant markets, but they are actually taking a large percentage of the trade in this town itself. Mr. Hobson, the chairman, said that a warehouse had been opened in Sheffield for the express purpose of stocking and selling German scissors, and various other speakers were constrained to admit that the foreign articles were by no means badly made. As a matter of strict and most surprising fact these German scissors are made at Solingen from Sheffield steel, and after beering freights in both directions, thus oust us at home. That this is so I have the best authority for stating, and I could, were it politic, mention the name of the Sheffield firm supplying the steel. When the German scissors come here they are offered at prices 30 to 40 per cent. below our own—wavers' scissors sold by the Sheffield manufacturers at 5/, being quoted by the importers at 2/3 free in London, or 3/here. The consequence is that the German scissors come here they are offered at prices 30 to 40 per cent. below our own—wavers' scissors sold by the Sheffield manufacturers at 5/ being quoted by the importers at 2/3 free in London, or 3/here. The consequence is that the Germans are doing a very large business here, because almost all the manufacturers in the the German send on the state that in others, albeit we may not, perhaps, have the result so immediately under our FOREIGN COMPETITION AGAIN. Australia, on account of the New South Wales railways, and I notice that the New York Tribune devotes considerable space in setting forth what the possibilities of an American trade with Australia and South America may do for the United States manufacturers. With Brazil you are just putting on another line of steamers, and with Australia you are greatly improving your shipping communications. From the Cape markets, too, we hear of the same thing over and over again; yet English manufacturers all over the country poob-pooh what is told them, and are apparently content to "let things slide" as they like. The workmen are also greatly to blame for their stupidly stubborn opposition to more modern mechinery, and cannot, evidently, be awake to the many evils of the laisses-faire policy, and fatally ignorant prejudice.

WILLIAM JESSOF & SONS (LIMITED).

WILLIAM JESSOP & SONS (LIMITED).

WILLIAM JESSOF & SONS (LIMITED).

The first annual report of this company was issued on Saturday, and is as follows: "Your directors beg to submit herewith the balance sheet duly audited, showing the position of the company after the first year's working. On the establishment of the company the properties were taken over in accordance with the agreement and articles of association, and the valuations received and adopted were as follows:

Mr. Charles Unwin's valuation of the freehold and leasehold land and buildings, including the gas works and plant. £ 8. d.

435,465 9

STAFFORDSHIRE AND BIRMINGHAM.

In North Staffordshire there are many stoppages of works, and there is a very limited amount of business doing at such concerns a continue in operation. The shipping trade with Liverpool, which is often considerable by reason of the proximity of the district to that port is now almost nil, only a few lots of T. B. and two or three other best brands having any

sale whatever. In South Staffordshire matters are quite as bad, and it is increasingly difficult to sell common brands, the question of profit being wholly lost sight of. The very highest classes of bars, sheets, plate and hoops are only being negotiated in small lots, most of which are for export. Trade in some of these is pretty good with Australia, recent papers from Melbourne stating that at the latter end of January Gossel Ook galantized corruptated is pretty good with Australia, recent papers from Melbourne stating that at the latter end of January Gospel Oak galvanized corrugated iron 5 feet to 9 feet was £28 to £28. 10/; Orb, £27 to £27. 5/; Three Crowns, £26, 15/, and Ema, £26; fencing wire No. 5, £14; No. 10, £17. 5/per ton, duty paid. At Sydney, fencing wire was then held at £18. These rates ought not to leave much profit for anybody judging by the prices here. There is some discussion as to the course of prices at the forthcoming quarterly meeting, and it is pretly generally thought that bars will come down 10/per ton. The demand for Birmingham and other hardwares is quiet on the average, although here and there an industry stands out a little from the ruck of its fellows. Edge tools, spades, shovels, forks, pearl and ivoly buttons, cut nails, locks and hinges are, perhaps, selling more freely than other goods bearing the "Brum" impress. Screws are moving off somewhat slowly, and there are accumulated evidences that the production is now very considerably in excess of the demand. It is thought that Nettlefolds alone could keep the civilized world pretty well supplied. The wrought nail makers of the Dudley and other "Black" districts are still out on strike, a fact which is tending to impart some little addi-"Black" districts are still out on strike, a fact which is tending to impart some little addi-tional stimulus to the cut nail branches. If these men continue stubborn much longer they will, like Othello, find their occupation gone. Brass wire and some classes of brass foundry are selling rather better, including some Wei-lenball brass lockwork. lenball brass lockwork.

SOUTH WALES AND MONMOUTHSHIRE.

Last week's total exports of iron from the ports of this district amounted to 3907 tons, much of it to Spain. Bleenavon Works are said to be working on orders for Gothenburg. At several establishments prices are said to be stiffening a little, and are likely to go up should the present favorable tokens hold out. Many per sons think the improvement will not be lasting, while others contend that the advent of nex' month will be marked by a further alteration for the better. In the tin plate trade there are more orders afloat, but buyers almost to a man decline to close transactions, except at a drop of 6d. to 9d. per box. The men's wages are likely to suffer owing to this depreciation, or attempted depreciation, of values.

THE METAL MARKETS SOUTH WALES AND MONMOUTHSHIRE.

THE METAL MARKETS have been very quiet, and most quotations have

have been very quiet, and most quotations have a tendency to come down.

The Mining Journal remarks: "Copper.—
The great event for the week has been the sale of 6000 tons of Chili bars from the Havre stocks to the French rollers. The exact particulars have not transpired, but it is generally understood that the deliveries will be made at the rate of 1000 tons a month, to be involved at the average prices of bars. be made at the rate of 1000 tons a month, to be invoiced at the average prices of bars for each month. Chili bars, forward, on late 'Change, were said to be sold at £69, 15/. Spelter.—The market is 2/6 to 5/ per ton lower. Zine at public auction has been sold at a reduction of 5/ per ton. Tim.—The variations have been triffing, but slightly favoring buyers, and prices are likely to continue so while trade keeps dull, and supplies show no material sign of falling off. To day sales have been made of Straits at £71. 5/, and Australian at £70. 5/. English is also reported at £74. 10/."

HARDWARE AT THE CENTENNIAL

Report of the Judges of Group 15.

The following is a transcript of the official report of the Judges of Group 15, Centennial Exhibition, including hardware:

INTERNATIONAL EXHIBITION, 1876,
UNITED STATES CENTENNIAL COMMISSION,
BUREAU OF AWARDS, GROUP 15,
PRILADRIPHIA, May 2b, 1876.
Judges met in room 8. Present—

Messrs. CHAS. STAPLES, of Portland, Me. DANIEL STEINMETZ, of Philadelphia, Pa. G. L. REED, of Clearfield, Pa. J. D. IMBODEN, of Richmond, Va.

DAVID MACHARDY, of Aberdeen, Scotland JULIUS DIEFENBACH, of Germany. Organized by electing Daniel Stelometz chair nan and Julius Diefenbach, secretary.

PHILADELPHIA, May 26, 1876 Judges met at 10 o'clock a. m. Present-Messrs. Steinmetz, Staples, Reed, Imboden MacHardy and Diefentach.

A communication addressed to F. A. Walker, Chief of Bureau of Awards, was read and ap proved, as follows:

PHILADELPHIA, May 26, 1876. F. A. Walker, Esq., Chief of Bureau of Awards, Group 15, desires to have—

1 Report book for recording Judge's report. 7 Small memorandum books for notes (pocket

1 Quire note paper.

1 Package of envelopes.

Also a statement in book form of all the exhibits upon which the judges of Group 15 are to pass judgment, together with location of said exhibits. The judges are of opinion that some modification might with advantage be made in the awards to depositors. It is very apparent that grades of excellence exist wherein it would not be proper that they should meet a common treatment, either by being entirely unnoticed, or by having awarded them all the commission proposes to give. The articles vary in their extent of importance and usefulness, as well as in their quality and adaptation to science, also in the beauty and extent of display. The judges also desire to be informed ss to the purpose of the Commission in point of liberality of award. Is it the purpose to be strict or liberal in the recommendations of the judges.

Ригадигрита, Мау 29, 1876. Judges met at 10 a. m., and proceeded to the Department of Germany, with results as follows. All members present, except Mr. James Bain, of Scotland:

tools; also scissors, pocket-knives, Same qualifications apply to these as to v and tools. Recommended for award

merit.

F. Willman, Altona, Germany. Luge assortment of fancy pocket knives, of good quality; also scissors and razors; prices moderate. Recommended for award of merit.

J. Bronsson & Sou, Germany. Considerable variety of bolts; nuts, rivets and nails. Especially commended.

Stolberg Garaftich Werigeronische, Ilsenburg, Girappontal estilus destructions.

7. Stolberg Garaffich Werigeronische, Ilsenburg. Ornamental castings, etc., remarkable for beauty, lightness and sharpness of castings. Recommended for award of merit.

8. Conrad Filsing, Berlin, Germany. Ornamental castings, chiefly busts, figures and ornaments, exhibiting high merit, designs and executions so good as almost to bring them within the domain of the fine sits. Recommended for award of merit.

9. Louis Roble, Dresden, Germany. Knobs and door trimmings of ornamental enamel, exquisite design and finish. Recommended for award of merit.

for awar 1 of merit.

for awar1 of merit.

O. George Leykauf, Nuremberg, Germany.

Burnishing stones; extensive display of bur
nishing tools of high quality and finish. Rec
ommended for award of merit.

Adjourned to meet to-morrow at room at

PHILADELPHIA, May 30, 1876. Judges met at 9 a. m., and proceeded to finish German Department, resulting as fol

11. Henry Boker & Co., Solingen, Germany 1. Henry Boker & Co., Solingen, Germany. An extensive assortment of pocketknives and seissors of special notice on account of beauty of patterns, very high finish and well set edges, while of moderate prices. This exhibit commends itself in every particular, and is well worthy of the highest consideration. Recommended for sward of merit. Exhibitors not being prepared to give proper attention to their exhibits, judges adjourned to meet to-morrow, 31st instant, at 9 a. m., and to obviate this difficulty in the future, Messrs. Diefenbach and MacHardy were appointed to arrange business in advance in the foreign de partments for a regular and systematic exami nation of exhibits.

PHILADELPHIA, May 31st, 1876. Judges met at 9 a. m.; committee, Messrs Diefenbach and MacHardy, reported no parties ready for examination to-day, but arrange ments had been made to visit the Swiss Depart ment to morrow.

PHILADELPHIA, June 1, 1876. Judges met at 9 a. m., and proceeded to con sider the Swiss Department, with results as follows:

12. I. Marc Seivet, Fils, Geneva, Switzerland 2. I. Marc Selvet, Fils, Geneva, Switzerland. Tools and instruments for watch makers and jewelers. An extensive assortment of cast steel files and tools need in the manufacture of watches and delicate mechanisms. The execution of work of these articles is very creditable, and especially the accuracy of the file cutting. Recommended for award of merit. merit. 13. S. L. Vautier & Sons, Switzerland, Tools

and instruments for watch makers and jewel-ers. Files cut with great precision of fine-ness and beauty. The other tools of good quality and finish. Recommended for award of merit.

of merit.

4. Heinrich Spellmann, Zurich, Switzerland. Engineering tools, squares, compasses, calipers, gauges, &c., accurately and substantially made, and in every way suitable for the purpose for which they are intended.

5. Jacques Lecoultre, Switzerland. Razors with interchangeable blades, of very excellent quality. Recommended for award of merit.

merit.

5. Jules Leresche Golay & Co., Switzerland.
Files and watch makers' tools of excellent

quality.

17. Louis F. Grobet, Switzerland. Tools and instruments for watch makers, files and small tools of fair quality.

18. U. F. Schneider, Geneva, Switzerland. Fancy knives of many blades, elegantly finished good quality.

ished, good quality.

Bengive Bros., Schaffhausen, Switzerland.
Upholsterers' nails; great variety of design and good quality.

Adjourned to meet to-morrow at 9 a. m. PHILADELPHIA, June 2, 1876. Judges met at room at 9 a. m., and pro

eeded to determine in regard to Germany. 20. A. De Lambert, Liege, Belgium. Files for watch makers and jewelers, and other tools of good quality, some of minute size, showing in file cutting the highest perfection.

ing in file cutting the highest perfection.
Recommended for award of merit.
21. P. & N. Nicaise, Mariculle, Belgium. Locomotive and other bolts, nuts, rivets, &c.; large assortment of excellent quality and flush. Recommended for award of merit.
22. Adolphe Fix, Brussels, Belgium. Iron and Brass nails; large variety of excellent quality. Recommended for award of merit.
23. Jean Baptiste, Fondu. Locks, hinges, &c. No remarks.

No remarks.
24. Velings & Co., Chatelet. Wire nails and rope; small assortment. No remarks.
26. H. Segant, France. Shoemakers' tools;

scissors, pruning shears, cooks' knives, &c.
Made at a reformatory institution for juvenile
offenders; of fair quality under the circumstances. Recommended for award of

merit.
1. F. Therenot, Nogent, Haute Marce.
Cleavers, cooks' knives, &c. Good substantial quality.
2. Thinet, Paris. Pocket knives, scissors, cooks' knives, &c; large variety; quality fair; prices low. Recommended for award of merit.

of merit.

J. Charbonne Thuillier, Nogent, Haute
Marne. Fine scissors and shears, of good
workmanship and excellent quality. Recommended for award of merit.

34. Vitry Bros., Pars. Pocket knives, scissors, &c., of good quality and finish.

55. Victor Perard, Paris. Sheep shears, (patent). An improvement of the ordinary shears.

Bain, of Scotland:

1. R. & H. Vorster (in Hagen), Germany.
Axes and edge tools of good fulsh, design and quality, and of moderate price. Recommended for award of merit.

2. Wilhelm Eisenfuhr, Berliu, Germany. Stocks, dies and reamers. Good serviceable tools made by hand. Recommended for award of merit.

3. J. S. Holler & Co., Solingen, Germany. Cutlery of excellent quality, great variety of styles and patterns. Recommended for award of merit.

4. T. Hessenbruch & Co., Ronsdorf, Germany. Small hand and bench vise, cutting nippers and piyers, plain fluish, and good, useful

40. A. Galloes, Parls, France. Brass, Iron and steel upholsterers' nails; large variety, well firished, and of good styles. Recommended for award of merit.

Adjourned to meet on Monday, June 5th, at a. m., at room.

PHILADELPHIA, June 5, 1876. Jury met at 9 a. m. and proceeded to consider Egypt : 41. Mechanics' Institute of Boolak, Egypt. En-

gines, tools, wrenches, drills, calipers, vises, &c. To be commended under the circumstances under which made.

42. Razor straps made from stems of plants, from Robert Thompson, Kingston, Jamaica. No remarks. 43. John B. Michelsen, Bergen, Norway. Heavy

John B. Michelsen, Bergen, Norway. Heavy pocket and hunting knives of primitive style.
 Krog-tad Society of Dimmer. Assortment of nails, spikes, &c. Material of best quality, but common manufacture.
 H. C. Van Henkelom, Utrecht, Netherlands. Nuts, bolts and spikes of very good quality. Recommended for award of merit.
 H. S. Enthoren, Netherlands. Nails, spikes, hinges, & ., of primitive character.
 Adjourned to meet to-morrow at room at 9 choose a me.

o'clock, a. m. (To be continued.)





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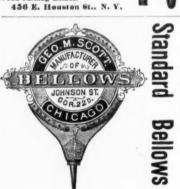
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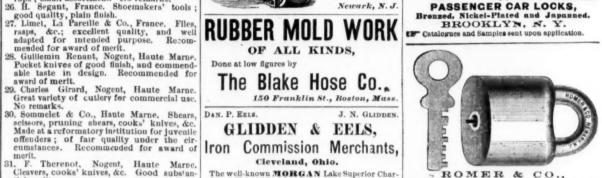




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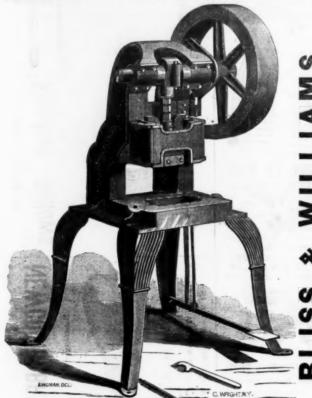
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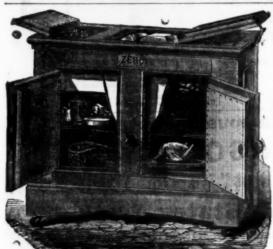
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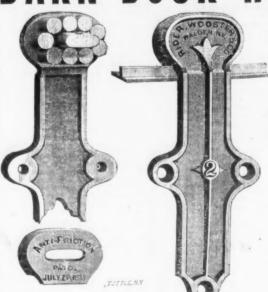
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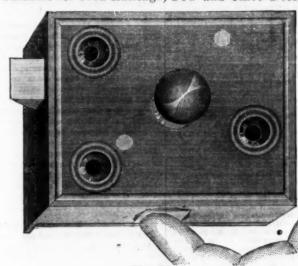
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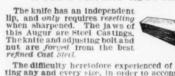
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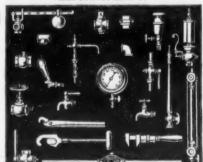
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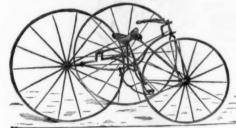


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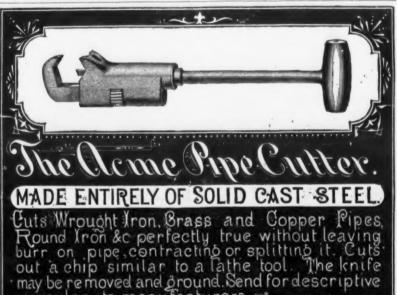
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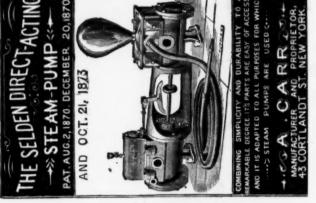
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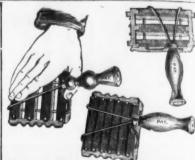
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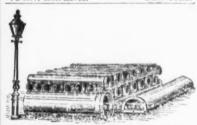
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Anso ais Brass and Copper Uo. 19 Cliff, N. Y. 2 Brass Goods Mfg. Co. 280 Pearl, N. Y. 2 Davol John & Sons. 100 John, N. Y. 2
Rolmes. Booth & Havdens 49 Chambers, N. Y. 2 Manhaitan Brass Co. 34 Reade, N. Y. 2 Miller Edw. & Co., 4 Warren, N. Y. 2
Servill Mfg. Co., 421 Broome. N. Y. 27 The Wilmot Mfg. Co., 50 Barclay, N. Y. and 98 John, Bridgendr. Cons.
Waterbury Brass Co. 52 Heekman N. 1. 2 Brick Presses. Makerh of Carnel F. L. & D. R., 1841 Germantown Ave., Philia., 28
Miller S. P. & Son, Philadelphia. 26 Bridge Builders. 8 Moseley Iron Bridge and Roof Co., 5 Dey, N. V.
Leighton Bridge and Iron Works Rochester, N. Y. 27 Brushes (wheel.) Preater P. M., 117 John, N. Y
Wilson John, Sheffeld, England
American Spiras Spring Buti Co. 22 Beekman, N. Y. 40 Blok Bros., Reading, Pa
Union Mg. Co., S Chambers, N. Y
The Hull & Belden Co., Danbury, Conn. 25 Carriage Helis, Makera 07. Townsend, Wilson & Hubbard, Phila. 12
Cnrriage Hardware, Makers of, Smith H. D. & Co., Plantaville Ct
Car Axles. Roberts A. & F. & Co., 385 S. 4th. Philadelphia 5 Car Convicts.
Resort John In & Co., 245 S. 4th, Philadelphia 5 Car Carlers A. & F. & Co., 245 S. 4th, Philadelphia 5 Car Comiers Labave John J. Reading, Fa
Buck Bros., Milloury, Mass
Buck Bros. Milbury, Mass. Churns. Churns. Churns. Chamberlin W. C Dubuque, Iowa Chamberlin W. C Dubuque, Iowa Coni. Minera of. Lehigh Valley Coal Co., cor Courtlandt and Church, N.Y. Pardee A. & Co., Ill Broadway, N. Y. 33 Powel Re bt. Hare & Co., Philadelphia, Pa. 16 Cha Hoboken Coal Co., Jersoy City, N. J. 35 Coni. Heds. Manifecturers of. Cant Heds. Manifecturers of. Easterbrook Win. 31 Cherry, Phila. 24 Coffee and Spice Mills. Lane Brothers, Millbrook, N. Y. 6 Enterprise Mig. Co., Philadelphia, Pa. 18 Colf Chaiti. Union Chait and Cable Co., Pittaburgh, Pa. 7 Colin Detector. Interts. N. V.
The Hoboken Coal Co., Jersey City, N. J
Conl Hods, Manufacturers of. Easterbrook Wm. 311 Cherry. Phila
Enterprise Mfg. Co., Philadelphia, Pa. 18 Call Chain. 18 Union Chain and Cable Co., Philadelphia, Pa. 7
Sutton J. W. S. Blandson, Manual Comments
Bemis & Call Hardw. & Tool Co., Springfed, Mass. 13 Christotte Chas., \$6 Br.adway, N. Y. Towne Arthur, Boston, Mass. Cooper's Tools, etc., Dealers sn. D. R. Barton Tool Co., Rochester, N. Y. Little Chas. E. 59 Fulton N. Y. Corn Shellers. Rumsey & Co., Seneca Falls, N. Y. Corn Shellers. Rumsey & Co., Seneca Falls, N. Y. Corn Shellers. Hongon of Bridge and Roof Co., \$1 Dey. N. Y. School of Bridge and Roof Co., \$2 Dey. N. Y. The Brown Cotton Gin Co., New London, Conn. 38 United States of Company of the Conference of Casell I. N. Fredericktown, Casell I. N. Fredericktown, O. Bazieton D. W. & Co., 24 Girard Ave., Fhila. 39 Hotchkins Sons, Bridgeport, Conn. 39 Lawrence Corry Comb Co., \$20 Dane, N. Y. 20 Lawrence Corry Comb Co., \$20 Dane, N. Y. 21 Centery, Importation, Co., 50 Dane, N. Y. 22 Centery, Importation, Co., 50 Dane, N. Y. 23 Centery, Importation, Co., 50 Dane, N. Y. 23 Centery, Importation, Co., 50 Dane, N. Y. 24 Centery, Importation, Co., 50 Dane, N. Y. 25 Centery, Importation, Co., 50 Dane, N. Y. 26 Centery, Importation, Co., 50 Dane, N. Y. 28 Centery, Importation, Co., 50 Dane, N. Y. 28 Centery, Importation, Co., 50 Dane, N. Y. 29 Centery, Importation, Co., 50 Dane, N. Y. 20 Centery, Importation, Co., 50 Dane, N. Y. 29 Centery, Importation, Co., 50 Dane, N. Y.
D. R. Barton Tool to., Rochester, N. Y
Rumsey & Co., Seneca Falls, N. Y
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Lawrence Curry Comb Co., 384 2a Avenue, N. Y
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John Russell Cuttery Co., 97 Chambers, N. Y
New York Knife Co., Walden, N. Y. Owen & Campbe'l, 220 N. Second, Phila. The Frary Cutlery Co., Bridgeport, Conn.
The Rogers Cuttery Co., Hartford, Conn
Hotchicias Sons, Bridgeport, Conn. Lawrence Curry Comb Co., 382 2d Avenue, N. Y. Cuttery, Importers of. Boker, Hermann & Co., 501 Dnane, N. Y. Clatworthy F. & W., 52 Chambers, N. Y. Clatworthy F. & W., 52 Chambers, N. Y. Lisher Jos. S., 411 Commerce, Phils. Friedmann & Lauteriung, 14 Warren, N. Y. Meriden Cuttery Co., 40 Chambers, N. Y. Meriden Cuttery Co., 40 Chambers, N. Y. Uttery, Manufacturers of. American Shoar Co., 40 Chambers, N. Y. Uttery, Manufacturers of. American Shoar Co., 40 Chambers, N. Y. Miller Horo, Cuttery Co., 50 Chambers, N. Y. Miller Horo, Cuttery Co., 50 Chambers, N. Y. Naugatuck Cutlery Co., 50 Chambers, N. Y. Dwen & Cambel, 20 S. Second, Phils. The Frary Cuttery Co., Bridgeport, Conn. The Lamson & Goodnow Mig., Co., 80 Chambers, N. Y. N. Y. N. Y. N. Y. Dredging, and Makers of Dredging Mackines, Am. Dredging Co., 10 S. Delaware ave., Phils. Sprilaws, Am. Dredging, Co., 62 Chambers, N. Y. Lambertville zon. Delaware ave., Phils. Sprilaws, Am. Dredging Co., 10 S. Delaware ave., Phils. Sprilaws, Ammufacturers of, France & Co., 62 Chatham, N. Y. Lambertville zon. Works, Lambertville, N. J. 2 A. Lambertville Lambertville, N. J. 2 A. Lambertville Lambertville, N. J. 2 A. 3 A. 4
Am. Dredging Co., 195. Delaware ave., Phila
Drifting Machines. Makers of. cox Afred & Co., Philadelphia
Thorne, Denards Drop Forgulage Boker Herm, Makers of, Leter The Baston Tool Co., Bochester, N. Y
The D. B. Barton roof Co., Bochester, N. Y 1: Doscher M., 4 and 6 Gold, N. Y 3 Electro-Pinting. Ernhout & Catin. 43 Gold, N. Y
Doscher M., 4 and von S. 1. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.
The Rivet Bucket Co., 54 Franklin, Chicago, Ill,?
Emery C. C., Chicago, III
Enameled Pintes. Lefferts Enamel Works, 417 W. 24, N. Y
Enameted Trites. Lefferje Saamel Works, 41; W. 24; N. Y
Austin J. & Co., 115 Liberty, N. Y

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!	Fryigh Chas. W. & Co., Kensington, Phila	Iron Pipe. (7	rin l.ined.) os., 62 Beckman, N. Y		, , 8
y	Hartford Foundry and Machine Co., Hartford Ct 36	Iron Railing	TH. PLC.		Ma
	Shapley & Wells, Binghamton, N. Y	Mitander Nile Prouware (6 St. Louis Stan	h, Importers of. 1,69 William, N. Y Frantie.) iping Co., St. Louis, Mo wer Wafe. 8,352 Pearl, N. Y	**********	. 4 5
GE.	McNab & Harlin Mfg. Co., % John, N. Y 36	Inwott John	C & Sons Buffalo W V		40 1
. 1	Enterprise Mfg. Co., of Pa., Phila, and N. Y	Japans (Cor Moller & Sch Brooklyn, 1	nal.) numann, Murcy & Flust N. Y atters, Manufacturers t Co. Syracuse, N. Y	ilng Avenues.	.35
81	Fig. Catters, Siver & Deliting Mfg: Co., Salem, U	Barnes Geo. d Hicken Sin	etters, Manufacturers of Co., Syracuse, N. Y	07	.28 B
.24 .24 .24	Files, importers or, Larr J. & Riley & John, N. Y. Larr J. & Riley & John, N. Y. Finacer Joseph S., 411 Commerce, Philis. If Frasse Peter A. & Co. 26 Fulton, N. Y. Moss F. W., 99 John, N. Y. Sanderson Bros. & Co., 16 Cliff, N. Y. Strines, Manufacturers or,	Lanterns, Me Inetz R. E Howard & Me	& Co., Syracuse, N. Y & Co., Louisville, Ky anufacturers of. (Tabular) 34 and 56 Fulto orse 43 Fulton, N. Y	on, N. Y	.40
13	Sanderson Bros. & Co., 16 Cliff, N. Y	Chadborn & C	Coldwell Mfg. Co., Newt	burg, N. Y	. 8
.41	Adminantine File Works, Providence, R. I. 18 American File Co., Pawtucket, R. I. 8 Auburn File Works, 89 Coambers, N. Y. 8 Harnett G. & H. si and 48 Richinoud, Phila. 6 Disston Henry & Sons, Phila. 29 Draper C. F. & Co., Sing Sing, N. Y. 2 Heller & Bros., Newark, N. J. 3 Hiscox File Mfg Co., West Chelmsford, Mass. 3 Jowitt The Bros., Lommercial, Newark, N. J. 3 Jowitt The Bros., Lommercial, Newark, N. J. 5 Nicholson File Co., Frovidence, R. I. 28 Nicholson File Co., Frovidence, R. I. 28 Paul Chas, B., Williamsburgh, N. Y. 2 Rottery John & Wm., Matteavan, N. Y. 8 Fire Mrlets, Makers of.	Lead Pipe. d Bayley, Farre Levels.	Israel H. & Co., Philadel &c., Manufacturers of . in & Co., Pittsburgh, Pa.	phia	. 23
12 12 .13	Draper U. f. & Co., Sing Sing, N. Y. Heller & Bros., Newark, N. J. Histox Fite Mg Co., west Chelmsford, Mass.	Diseton Heur	v & Sons, Phila		.29
59	Johnson & Bro., 1 Commercial, Newark, N. j. R. Jowitt Thos. & cons. Sheffield	Romer & Co. Union Nut Co	Newark N. J. o. 78 Beeknish, N. Y. s Lock Co., King-ton, M. fg. Co 298 Broadway, N.		23 23 34
17	Paul Chae, B., Williamsburgh, N. Y. S. Rothery John & Wm., Matteawan, N. Y. 8	Yale Lock M. Machinery.	s Lock Co., King-ton, Mi fg. Co., 298 Broadway, N. Makers of.	Y	. 3 5
. 28 43	Pire Brick, **Marea of** Dyker S. L. Reform of the Brick Works. Van Dyker S. L. Reform of the Brick Works. Van Dyker S. L. Reform of the Brick Works. Van Gefriter, Studre & Co. Piteoprefit	Heald S. & So Pittsburgh M Pratt & White	the tree of the control of the contr	m.ty U	.24 .39
. 26	Hall A. & Sons, Ferth Auriov, N. J	Teat, C. A. & Wetnerill Ro	& Co., 1600 Hamilton Ph W. L., 4116 Lusiow, Phi burt & Co. Chester, Pa.,	ila la., Pa	39 5 36 38
13	Newton & Co., Albany, N. Y. 28 Ostrander James & Son, Troy, N. Y. 98 Valentine M. D. & Bro., Woodbridge, N. J. 8	Boone W. C. Ducteux C., Lyon & Fello	. 8 Humbo'dt, Brooklyn 93 Elizabeta, N. Y	, E. D	. 12
r- 6	Watson John R. Perth Ambov, N. J. 28 Weeper Adam, 633 E. 19th, N. Y. 28 Fire Escapes, 28	Machinian' Blaisdell P. 6	achine Serew Co., III Li Tools, Makersor. Co., Worcester Mass. Co., 14 Dey, N. Y	berty, N. Y	.12
85	Weber Adam, 633 E. 18th, N. Y. 93 Fire Escapes, Falk L., 165th, N. Y. 77 Flint and Emery Paper and Cloth, 86c. cr. Adamson & Co. 730 Market, Phila 29 Flinting Olin-blues, 84c. cr. Adamson & Co. 730 Market, Phila 28 Flinting Olin-blues, 84c. cr. Adamson & Co. 730 Market, Phila 28 Flinting Olin-blues, 84c. cr. Adamson & Co. Philadelphia 17 Flig Trap. 17 Flig Trap. 17 Flig Trap. 17 Flig Trap. 18 Flig Trap. 18 Flig Trap. 19	Michiniata, Leng & Ogde	n. 212 Pearl, N. Y		.26
85	Sauerbier's Sons, H., Newark N. J. 28 The Afficieus Macbine Co. Philadelphia 17 Fly Trap. 17	Hammer & C Meeker D. M Mallenble	on, 212 Pearl, N. Y		.37 5
16	The Affection Machine Co. Philadeiphia. 17 Fly Trap. Loring Abbott & Co. 6 Centfal, Bonton, Mass. 3 Forgress, Portable, etc. Aerstone Portable Forge Co., Philadeiphia. 39 Founders and Machiniass. Founder Forge Co., Philadeiphia. 6 Forge Co., Philade	Eddy GeoM.	L & Son, Newark, N. J., Рирем. k Co., 353 Clarson Ave.,	Brooklyn, N.	37 Y 6
25	Sami. J. Cressweil Jr., 812 Kace, Phila., Pa. 6 Foundry Facious. Paxon J. W. & Co., 514 Beach, Phila. 5 Whitehead Bros., 517 W. 15th, N. Y. 4	N. Y. Handle	& Mallet Works, 456 E.	Houston	. 28
38	Whitehead Bros., 517 W. 15th, N. Y. 4 Furnaces Makers of Richmond & Ports, 119 S. Fourth, Phila., Pa. 5	Mangles. Standard Las	anganese Co., 214 Pearl, andry Mach. Co., Boston ing Machtorry. Works, Burlington, Iow works, Durlington, Iow works, Durlington, Iow works, Durlington, Iow works, Durlington, Iow & Co., Cliff, N. Y., Co., US Wainut, Phila., re & Co., Cliff, bet. John Son, Cor. South a. d Pen. 196 William, N. T., Co., St. Louls Mo. odgett 339 Walnut, Phila.	& New York.	.23
18	Richmond & Potts, 119 S. Fourth, Phila. Pa. 5 Gnivanized Iron. Lefterts Marshall Jr., 90 Beckman, N. Y. 4 Gns Fittery- Supplies. Proules H. & Co., 14 Dey, N. Y. 16 Glass Signs.	Murray Iron Meini Denie Crane U. O	Works, Burlington, Iow ers and Brokers.	a	.33
33 .64	Ginas Signs. Otto Steitz, N. Y. G'ass Letter Co., 188 Grand, N. Y. 5	Graves O. W. Greeg H. L.	an Dusen & Co. 29 & 31 . 42 Clift. N. Y. . 00. 43 Wainut Phila	Cliff, N. Y	. 2 5
12	Behr Herman & Co., 261 Pearl, N. Y	Purves A. & Quincy J. W. Seilew R. &	Son, cor. South a :d Pent. Son, cor. South a :d Pent. Son, cor. South a :d Pent. Son, St. Louis Mo	a, Pulla	15
18	Semple & Dirge Mig. Co., St. Louis, Mo	Metallurgis Britton J. Bl Metals, Au	Co., St. Louis Mo	a	. 6 8
. 16	Celluloid Emery Wheel Co. Newark, N. J	Baldwin B. V Bion's Smelt Metals Peri	W., Pitisburzh, Pa Ing Works, Williamsbur Iornted	g, N. Y	2
. 6	Worshington & Sona, North Amherst, O	Metal Roofi Brass Goods	8th ave bg. Mig. Co., 250 Pearl N. Y dles. Makersoy 's Sons, 10 and 12 Frankii cbines. E. Branford (com		28
40000	1 add to 5 Thomas 4 Th.	James Boyd Molding Ma Hammer T.	's Sons. 10 and 12 Frank! chiues. F., Branford, Conn	in. N. Y	39
2	Harvey H. H., Augusta, Me	Dietz R. E. S	Hand 56 Fulton, N. Y.		. 40
n, 2 2	N. Carolina Handie Co. 79 Reade, N. Y. 34	Natis Morris, Whe	eler & Co., 16th & Marke	et, Phila	. 16
. 28	Heaton & Derckla, Philadeiphia, Pa. 24 Walbridge G. B. & Co., 83 Keade, N. Y. 31 Walsh, Coulter & Flagler, 83 Chambers, H. Y. 8	Zug & Co., F	r & Co., Pittsburgh, Pa. Pittsburgh, Ps.	gton, by	: 1 8
5	Wilson J. Clark & Co., 81 Beekmav, N. Y. 34 Hardware Denlerge Barker W. C. & Co., Chleago 12 Brower John I. & Son, 286 Greenwich, N. Y. 25 Llovd. Supplee & Walton. & Market, Phila. 34 Frouty Hardware & Mfz. Co., 35 Beekmen, N. Y. 29 Quackenoun, Fownsend & Co., 65 Reade, N. Y. 35 Sheparo Sidney & Co., Buffalo N. Y. 31 Hardware importers. 31	Nail Puller Maitby. Curt	eler & Co., 16th & Mark neler & Co., 16th & Mark n Wire Nail Co., Course re & Co., Pittsourgh, Pa., vittsburgh, Pa., nery, Pittsburgh, Pa., ry, Pittsburgh, Pa., 18s & Co., 34 Reado, N. Y		4
27	Liova. Supplee & Walton, & S. Market. Phila. 34 Prouty Hardware & Mfg. Co., 57 Beckmen, N. Y. 29 Quackenoush, Townsend & Co., 65 Issade, N. V. 38	Colt A. T., 47 Condit, Han	ias & Co., 31 Reade, N. Y Fra. I Beekman, N. Y. ton & Van Winkle, New hu, 37/4 N. Seventh, Phil ickel Works, 180 and 181 Franklin, opposite tom & Co., 121 E. 18, N. Y. L. 114 Fulton, N. Y. Apes, Rotters of.	ark. N. J	27
33	Sheparo Sidney & Co., Buffalo N. Y	Manhattan Menahan J., Owen S. S. &	Franklin, opposite tom & Co., 121 E. 18, N. Y.	Center, N. Y	
53	Snepard Staney & Co., Buffalo N. Y	Western Mand Wi			
. 39	Hardware Manufacturers, American Solrid Spring But Co., 82 Beckman, N. Y. 40 Hake Bros, Hardware Co., New Haven, Conn. 33 Highin Philip S., 93 Reade, N. Y. Civit & C., Buffalo, N. Y. Corbin P. & F. New Britain, Conn. Cowics Hardware Co., Unionville, Ut. 23 Enterprise Mig. Co., 7 Phila. Hiller's Pails Mig. Co., 14 Chymbers, N. Y. 25 Feer G. Webster, 10 Chambers, N. Y. 5 Prot G. Webster, 10 Chambers, N. Y. 5 Providence Tool Co., Providence, H. 1 Hussell & Erwin Mig. Co., New York Union Mig. Co. 90 Chambers, N. Y. 7 Van Wasoner & Williams 82 Beckman, N. Y. 60 Wilson Mig. Co. 93 Chambers, N. Y. 36 Wilson Mig. Co. 93 Chambers, N. Y. 36 Wilson Mig. Co. 93 Chambers, N. Y. 36 Wilson Mig. Co. 95 Chambers, N. Y. 36 Hardware Succial Hiles.	Anderson C. Note Broker Gallauget P.	Hic. W., 34 CHff, N. Y		35
35	Biglin Philip S., 95 Reade, N. Y. Clayk & Co., Buffalo, N. Y. Corbin P. & F., New Britain, Conn.	Cark Bros. e Fuier, Lord	W. Sand 5 Wall. N. Y. etc., Makers of. s. Co., Mildede. Conn.	Ý	12
18	Enterprise Mig. Co., Phila. 12 Miller's Fails Mig. Co., 74 Chembers, N. V. 25 Peor G. Webster, 110 Chember, N. V. 25	Lewis, Olive Russell, Bird Shelton Co.	g Co., Mildelle, Conn & Co., 189 Greenwich, N. H. & Co., Pawtocket, R., r & Phillips, Pittsburgh, sail & Ward, Port Cheste Birmingham, Conn O., 78 Beekman, N. Y	Par. N. Y	13
5	Perin & Gaff Mfg. Co., Cincinnati, O	Union Nut C	& Co. 242 Pearl N V		84
6	Russell & Erwin Mig. Co., New York. 10 Union Mig. Co. 19 Chambers, N. Y. 7 Van Wagoner & Williams 82 Beekman, N. Y. 40 Wilson J. Clark & Co. 81 Beekman, N. Y. 40	Les er Oil Co	ting. Makers of o., 81 Maiden Lane, P. Y. & Co., 108 Walnut, Phila		28
13	Wilson Mfg. Co 97 Chambers, N. Y. 36 Hardware "pecinities. 37 Grant & Co., Newark. N. J. 34	Ore Crushe Blake Crush Packing (*)	er Co., New Haven Ct.	deiphis	33
h. 33	Wilson M.R. Co 24 Commoers, N. Y. 34	Paint (Iron	Co., Philadelphia	h, Pa	36 8
16	Spencer & Underhill, 54 Beckman, N. Y	Devoe F. W	& Co., 117 Fulton, N. Y		. 1
. 31	Hicks O. H. & Co., Baltimore, Md	A. V. Briese Howson & S	ell & Co., Pittsburgh, Pa 10 pt. 10 pt. 11 pt. 12 pt. 13 pt. 14 pt. 15 pt. 16 pt. 17 pt. 18	on. D. C	. 15
6	Horsting Engines. Makers or. Grane Bros. Mfg. Co. Chicago, III. 9 Mundy J. S. Newark, N. J. 39 Herrse Nails, Makers or 39 Ausable Horse Nail Co. 35 Chambers. N. Y. 8 Globe Nail Co. Boston, Mass. 38 National Horse Nail Co. Vergennes, Vt. 45 Northwestern Horse Nail Co. Chicago, III. 35 Platt & Co. Buffalo, N. Y. 36 Platt & Co. Buffalo, N. Y. 37 Surfalor S. & Co. Neponset, Mass. 36 The Fowler Nail Co. Seymour, Conn. 36 Herrse Desce, Makers of . 38 Surfaces, Makers of . 38 Surfaces, Makers of . 38 38 38 38 38 38 38	Spencer A. Pipes, Fitti Exton. Cole	H., 28 State Boston, Mas ngs. etc., Makers of. & Burnham Co., 58 John	. N. Y	26
7	Globe Adl Co., Boston, Mass. 83 National Horse Nail Co., Vergennes, Vt. 25 Northwestern Horse Nail Co., Chicago, III. 98	Pancoast & Pipe. Wate Leighton Br	Maule, 227 Pear. Phila Maule, 227 Pear. Phila 1 and Gan, Makers of . Idge and fro : Works. R.	nchester N V	26
21	Pratt & Co. Buffalo, N. Y. 31 Putnam S. & Co. Neponset, Mass. 6 The Fowler Nail Co. Seymour, Conn. 33	McNeal Joh Warren Fou Wood R. D.	n & Sons, Burlington, N. nary & Macn, Co., Philli & Co., 400 Chesnut, Phil	peburg, N. J.	6 7 26
8	Herse Notes, Makers of, Boston Rolling Mills, 17 Batterymarch, Boston. 4 Burden Iron Works, Troy, N. 1 Rhode Island Horse Shoc Co., Providence, E. I., 39 Schoenberger & Co. Pricaburgh, Pa. 4	Buck Bros., D. R. Barton	Manufacturer of Milibury, Mass n Tool Co., Rochester, N	. Y	13
,28	Dudgeon Bichard, 24 Columbia N V	Bailey Leon D. R. Berton Staniev Ruio	ard & Co., Hartford, Con n Tool Co., Hochester, N & Level Co., & Chambo	Y	13
5	Lyon E 4P Grand, N. F	Derby Stive Hail, Elton	Co., Derby. Ct	Ÿ	40
38	Hartford Steam Boller Inspection and Insurance Co29 Iron Brokers. Boynton Geo. A. 70 Wall, N. Y	Plows. Tho Plows, Chi South Bend	a. & Co., Lovisville. Ky. lled Iron. Makera of. Iron Works, South Ben. Materials, Mansfacta s. M., Scranton, Pa & Co. 106 Centre, N. Y.	d Ind	8
29	Iron Brokers	Everhart Ja Carr Wm. S.	Materials, Manufacta is. M., Scranton, Pa & Co. 106 Centre, N. Y.	irers of	40
26	Leighton Bridge and Iron Works, Hochester, N. Y. 25	Eureka Dig	ger Co., 84 William, N. 3	J	26
11	Iron (Unstings.) Spencer's Sons. I. S Gullford. Conn	Power Har	omers. Makersol	. н	38
11	Adams Hugh W., 56 Pine. N. Y. 4 Brown T. Horace, 205; Wainut, Phila. 5 Gidden & Eells, Cleveland, O. 23	Merriman A The Stiles &	wer, Makers of. liams, 167 Prymouth, Bro A. H., West Meriden, Ct. Parker Press Co., Midd	letown. Ct	24
40	Irvine A. A., 14 Murray, N. Y		itowers. Makers of. octable Forge Co., Phila riction. ock Works. Lockport. N.	delphia	39
11	Williamson James & Co. 69 Wall. N. Y	Pumping E Rider, Woo Pumps, Mai	ork Works, Lockport. N. ngines, (Hot Air) Mai ster & Co., Walden, Ora kers of	ers of uge Co., N. Y.	24
7a. 11	Williamson James & Co., 49 Wall, N. Y. Fron Persiers. Abeel Brothers, 190 South, N. Y. Bonnell, Botsford & Co., Youngstown, O., 4 Borden & Lovell, 70 and 11 West, N. Y. Cooney Jamiel F, 85 Wasnington, N. Y. Herstell G. 99 Market Silp, N. Y. Faller, Lord & Co., 199 Greenwich, N. Y. Hartson & Chillion, 580 to 52 Water, N. Y. Jackson & Chase, and 45 Water, N. Y. Jackson & Chase, and 45 Water, N. Y. Jones Walker, 95, 87, 99 and 91 Eim, N. Y. Pierson & Co., 24 Broadway, N. Y. Quincy John W. & William, N. Y. Randall & Jones (Taylor Iron), 10 Oliver, Boston, Mass	Kilvere & T Nason Mfg.	ster & Co., Walden, Ora kers of. & B., Middletown Cons appen Boston, Mass, Co., T Fulton, N. Y ster & Co., Wulden, Ora Co., Seneca Fails, N. Y. Co., Seneca Fails, N. Y. Co., Se Chambers, N. Y. A., Cincinnat., O	nme Co. N. V	36
34	Huerstell G. & Co., 130 Greenwich, N. Y. 4 Hurrison & Gilloon, 558 to 562 Water, N. Y. 4 Jackson & Chase, 206 and 206 Franklin, N. Y.	Rumsey & C Union Mfg. Yingting J.	Co., Seneca Fails. N. Y. Co., 96 Chambers, N. Y. A., Cincinnat', O.		7
36	Judson B F 45; and 459 Water, N. Y 4 Moore Geo, S. & Co., Louisville, Ky. 4 Ocace Wallace, %, 87.99 and 91 Elm, N. Y 4	Pyrometer Brown Edw Bailroad	ard, 311 Wainut, Phila		***
38	Pierson & Co., 24 Broadway, N. Y. Quincy John W. Se William, N. Y. Kandall & Jones (Taylor Iron), 10 Oliver, Boston,	Rogers H. A. Sempta W.	L. 19 John. N. Y. & A. C., 44 Third, Louist	ville, Ky	6
38	Reed John H. & Co	Cambria Iro Cleveland R	ard, 3:1 Wainut, Phila **sppif*ra Tyier Baitimore, Md 19 John, N. Y. & A. C., 44 Third, Louis to F Meel, Makers of. , Pottsville, Pa m. Co., Johnstown, Pa. Lolling Mill Co Clevela. boln A. & Co., Troy, N. Y. Thomson Steel Co., 57 B. man, 3: Wail, N. Y. ps., Makers of. e Novelty Works, Roch Loys Loys Loys Loys e Novelty Works, Roch Loys Lo	nd, O	6
13	Warner A. B. & Sons, 26 and 29 West, N. Y.	The Edgar' Wood & Le	Thomson Steel Co., 57 Br man, 85 Wall, N. Y.	oadway, N. Y	88
27	Whitney A. E. & Bro. 38 Hudson N. Y	B. F. Badge The Spragu	er & Son Charlestown. le Novelty Works, Roch	Mass iester, N. Ys	a 16
87	Bradley, Reis & Co., 22 Cliff. N. Y Burden Iron Works, Troy, N. Y Cleveland Rolling Mill Co., Cleveland, O.	Lesley Alex Rivets. Hoopes & T	11 DE 1 000 TT - 40EL DY - X		- 41
21	Everson. Macrum & Co., Pittsburgn, Pa. J. & J. Rogers Iron Co., Ausable Forks, N. Y Leonard John, 450 & 451 West st. N. Y	Townsend Road Holle	ownsend, Philadelphia, n Peter, 31 North 6th, B W. P. & Co., Pittsburgh, PFS. n Works, 149 William, B	Pa	4
39	Oxford Iron Co., 8i Washington, N. Y. Phillips, Nimick & Co., Pittsburgh, Pa	Rond Scra Semple & B	on Works, 149 William, 8 pers. &c. Sirge Mg. Co., St. Louis, 111 Machinery, etc., es, Cor 18th and Button	Mo Manujacture	33
5	Rowland James & Co., 930 N. Delaware, Phila	Hoofing Pa	tallic Paint Co., 166 Ful	ton, N. Y	9
36		The Blake Rules, Man Stantev du	ufacturers of. le and Level Co., 35 Chan	nbers St	
35	Wood W. D. & Co., Pistaburgh, Pa	Stephens &	Co., Riverton, Conn	********	9

	HE IRON AGE	
39	Iron Pipe. (Tin Lined.) Tatham & Bros., 52 Beekman, N. Y	Saddlerv Hardwar". Hayden & Smith, Auburn, N. 1
96	Tatan & Bros., St Deckman, N. Y. Fron Ratilinas, etc. Nellis A. J. & Co., Pittsburgh. Fron, Favedish, Importers of. Mitander Nils, 69 William, N. Y. Fronware (Granite.) St. Louis Stamfping Co., St. Louis, Mo. Japanese Paper Wife. Jennings Bros., 33 Pearl, N. Y. Japanesed Ware. Japanesed Ware.	Sand, and Emery Paper. Makers of Besdef Assamson & Co. 730 Market, Philis
39	Bt. Louis Stamping Co., St. Louis, Mo	Babcock C. P., Fortland, Me
29	Japanese Taber Ware, Jenuings Bros, 352 Pearl, N. Y	Atkins E. C. & Co., Indianapolis, Ind
18	Japans (Copal.) Moller & Schumann, Marcy & Flushing Avenues, Brooklyn, N. Y. Keys and Cotters, Manufacturers or	Saws, Makers of. American Saw Co., Trenton, N. J. American Saw Co., Indianapolis, Ind. 29 Arkins E. C. & Co., Indianapolis, Ind. 21 Boynton E. M., 80 Beckman, N. Y. 29 Daston Henry & Sons, Phila. Peace & Hogan, Williamsburg, N. Y. Wheeler, Madden & Clemson Mig. Co., Middletown, S. Y. S. Y.
38		Peace Harvey W. Williamsburg, N. Y
27	Ostros twa. s. Co. Syracuse, N. 1	Bonless Manufacturers of. 12 Frandon Mg. Co., Brandon, Vt. 12 Chattillen John & Sons, H Cliff, N. Y 9 Fuirbanks & Co., 311 Broadway, N. Y 5 Kienie Bros., the above Muster, Phila. 26
32	Howard & Morse 45 Fulton, N. Y	Fairbanks & Co., 3H Broadway, N. Y
18	Lathers, Johnson, Jr. Israel H. & Co., Philadelphia	Screws, Makers of. American Screw Co., Providence, R. I
29	Levels. Levels. Levels. Levels. Disston Henry & Sons, Phita	Miles F. S., 205 Quarry, Phila
a dea	Bettennan Wison, Broadway and Kossuth, Brooklyn	Screws, Importers of. Brace Geo. W., I Platt, N. Y. Screw Drivers, (Improved) Makers of. Disston Henry & Sons, Phila.
8 8	E. D. 23 Romer & Co., Newstra, N. J. 23 Union Nut Co., 78 Beekirtan, N. Y. 34 United States Lock Co., King-ton, Mass. 23 Yale Lock Mig. Co., 298 Broatway, N. Y. 3	Scroll Saws, Trump Bros., Wilmington, Del
8	Yale Lock Mfg. Co. 298 Broadway, N. Y 3 Machinery, Makers of. Bliss & Williams 167 Prymouth Brooklyn	Scythe Stones. Dishman F. E., New Albany, Ind. 33 Pike A. F., East Haverhill, N. H. 33 **Ma01ng**
Van 28	Yaie Lock Mfg. Co., 298 Broadway, S. Y. 3 Machinery, Makers or. Bliss & Williums, 167 Pivmouth, Brooklyp. 96 Heald S. & Sone Barre, Mass. 24 Pittsburch Mfg. Co., Pittsburgh, Pa. 39 Pratt & Whitney Co., Hartford, Cong. 38 Sellers Wm. & Co., 1600 Hamilton Phila 39 Teat, C. A. & W. L., 416 Lusiow, Phila, Ps. 36 Wetnerell Robert & Co., Chester, Pa. 38 Machine Sprews, Makers of, 38 Machine Sprews, Makers of, 38	*hating. Wood Themas, Philadelphia
28	Sellers Wm. & Co., 1600 Hamilton Phila	
28 28 98	Muchine Screws, Makers of . Boone W. C. 28 Humbo'dt, Brooklyn, E. D	Shove is, &c.c. Show is, &c.c. Sho
2% 28	Boure W. C. & Humbo'dt, Brooklyn, E. D	Sparks Thos. W., 121 Wainut, Philadelphia
73	Worcester Machine Screw Co., Itt Liberty, N. Y., 12 Machinistis, Tooles, Maker, Or. Blaisdell P. & Co., Worcester Mass. 38 Prentiss H. & Co., 14 Dey, N. Y., 7 Machinists.	Shears Scissors &c. Marx Bros. 43) B'way, N. Y
29	Long & Ogeen, 21? Pearl, N. Y	Shen's (Sheep), Hildack A. H. & Co., 12 Warren, N. Y
3	Meeker D. M. & Son, Newark, N. J	Skate Sharpenera. American Skate Sharpener Co, Selins Grove, Pa 28
39	Mecker D. M. & Son, Newark, N. J	Sleigha. Crosby, Gilzinger & Co., Isondout, N. Y
6	Hallers, Co. Society of the Houston Ave. 1 C XT. Handle & Mallet Works, 456 E. Houston	Binn's Smelting Works, Williamsburgh, N. Y. Du-Plaine & Co., 1303 & 1805 Buttonwood, Phila. 40 Hooks Smelting Co., Phila., Pa. 22 Reeves Paul S., 750 South Broad St. Phila. 44
5	Ment Chapping Machinery.	Mnane.
4	Metni Deniers and Brokers. Cane U. O., 48 dohn. N. Y	Hold Back & Snap Co., Troy, N. Y. Speiter Manning & squier, 113 Liberty N. Y.
16 . Y. 5	Murray Iron Works, Burlington, Iowa 33 Murray Iron Works, Burlington, Iowa 34 Muray Iron Works 4 Dickgroon, Van Dusen & Lo. 29 & 31 Cliff, N. Y 2 Graves O. W. 42 Cliff, N. Y 2 Graves O. W. 42 Cliff, N. Y 5	Spring Door Sheaves. Shannon J. B., Philadelphia
38	Paters, Dodge & Co., Cliff. bet. John & Fult Jn. N. 7 2 Purves A. & Son, cor. South and Penn, Phila	Berings. Rowland Wm. & Harvey, Frankford, Phila. 44 Stamped and Japanned Tip Ware. Shepard Sidney & Co., Buffalo, N. X
35	Sellew R. & Co., St. Louis Mo. Mo. Morating ista. Britton J. Blodgett 339 Walnut Phila. 6 Metals. Anti-Friction. Bildwin B. W., Pittaburzh, Pa. 40 Bion's Smelting Works, Williamsburg, N. Y. 2 Metals. Perforated.	Crossley H A Cleveland O
88	Belluwin B. W., Pitteburzh, Pa 40 Bion's Smelting Works, Williamsburg, N. Y. 2	Steam Hummers, etc., Makers of. Bradley Mfg. Co., Syracuse, N. Y
33	Metals Perforated. tayes 6, 71 8th ave. Metal Roofing. Brass Goods Mtg. Co., 250 Pearl N. Y. 28	Stram Pumps, etc., Manufacturers of Betts E. & A., Wilmington, Del
15	Miners' Candles. Makersoy James Boyd's Sons. 10 and 12 Franklin. N. Y	Knowles Steam Pump Works, Warren, Mass. 3
32	Hammer T. F., Branford, Conn. 24 Mouse Traos. Catchemative, Makers of. Dietz R. E., 54 and 56 Fulton, N. Y. 40	McGowan John H. & Co., Circle Patt. O
84	Mowing Machine Knife Grinder.	Steam Trans Albany Steam Trap Co. Albany, N. Y
24	Fourer Menry, Canton, U. Norris, Wheeler & Co., 16th & Market, Phila. The American Wire Nail Co., Covington, ky 25 Schoenberger & Co., Pittsburgh, Pa. 4 ang & C., Pittsburgh, Pa.	Store Constitute Statistic Current of Blowell J. C. Pritsburgh, Pa
81	Schoenberger & Co., Pittsburgh, Pa. 4 Zug & Co., Pittsburgh, Pa. 4 Nail Machinery. Cuyan & Hatry, Pittsburgh, Pa. 4 Nail Pallers. 4	Fittsburgh steel Casting Co., Pittsburgh, Pa. 48 Steel Importers, Carr J. & Kiley, 82 John, N. Y
34		Sulzbacher, Hyman, Wolff & Co., & Cilff, N. Y
34	Maitby, Curtiss & Co., 34 Reado, N. Y	TOOBOR FRANCIS & SON, #J JOHN, N. Y. 3 JOHAS, MEYER & COVER, Sheffield, Eng. 3, 3 Moss F. W., 89 JOHN, N. Y. 8 Plersons & Co. 24 Broadway, N. Y. t anderson Bros. & Co., 16 Cliff, N. Y. 3 Sanderson Geo. & Co., 57 JOHN, N. Y. 3 Van Wart, Son & Co., 133 and 136 Duane, N. Y. 1
81	Manhattan Nickel Works, 180 and 182 Center, N. Y. 27 Menahan J., Frankiln, opposite tombs, N. Y. 27 Owen S. & & Co., 121 E. 18, N. Y. 27 Wilder & Co., 114 Fulton, N. Y. 27	Bandal & Joseph Dollars Bandan Mana
	Rowland Wm. & Harvey, Frankford Phile	Sandah & Johes, 10 Ohver, Boston, Mass Steel Manufacturers. Chrome Steel Co., Bookivn, E. D. Clevenand Rolling Mil Co., Clevenand, O. Grawold John A. & Co., Proy, N. 1. Marvale Steel Works, Micrown, Phila, Pa. A. Marvale Steel Works, Micrown, Phila, Pa. A.
15 . Y40	Anderson C W 24 CHW 37 V	Griswoid Jonn A. & Co., Troy, N. Y. Marvale Steel Works, Nicetown, Phila., Pa. 3, Miller. Metcalf & Parkin, Pittsburgh. 3 Rowland Wm. & Harvey, Franktord Palla. 4 Smith, Sutton & Co., Pittsburgh, Pa. 3, 8
3	Noir Broker. Gallauger. W 3 and 5 Wall. N. Y 4 Nurs. Bolts. erc., Makers of. Gark Bros. c Co., Middele. Conn. Fuier. Lord & Co., 189 streen witch N. V	Smith, Sutton & Co., Pittsourgn, Pa
23 18 25	Fuier, Lord & Co., Bardese, Conn. 12	Wardlow S. & C., Sheffield, England
5	Shelton Co., Birmingham, Conn	Clark & Co.'s 16c & 16t W. 27th, N. Y. Steel Npirni Spoing. Manufacturers of Chatillon & Sons, 91 and 38 Cliff, N. Y. Steel Stromps. Rogers Richard H., 45 Ann, N. Y.
10	Cook Stoves. 31 Cook Stoves. 32 Cook Stoves. 33 Cook Stoves. 34 Cook Stoves. 35 Cook Stoves. 36 Cook Stoves. 37 Cook Stoves. 38 Cook Stoves. 39 Cook	Stocks and Dless Holloyd & Co., Waterford, N. Y
26	Old Iron, etc. Grezz H L. & Co., 108 Walnut, Philadelphis	Smith Dillwyn. 18 S. 6th, Philadeiphia
5 6	Packing (Steam). Symonds & Co., Philadelphia	Stove Boards, Manufacturers of Ansonia Brass and Copper Co., 19 and 21 Cliff, N. Y Shevard Sidney & Co., Buffalo N. Y
31	P. Ataburgi Iron Paint Co., Pittsburgh, Pa	Stove Ornaments. Troy Polishing Works, 641 River. Troy, N. Y2 Tracks.
18	Lewis, Daizell & Co., Pittsburgh, Pa	American Tack Co., Fairhaven, Mass., American Tack Co., Fairhaven, Mass., Brigham, Litchfield & Vinng, S. Abington, Mass., S. Fried A., & Sons., Sunton Mass., Grundy & Kenworthy, 165 Greenwich, N. Y., Shelton, C., Uterstenson, G.
9		Taps and Dies.
83	Eaton. Cole & Burnham Co., 58 John. N. Y. 26 McNab & Harlin Mig. Co., 56 John. N. Y. 26 Pancoast & Manle, 22 Pear Phila	Tapa and Diess Manning H. S. & Co., 111 Liberty, N. F. Try Squares, Hevels & C., Makera of Bailey Leonard & Co., Hartford, Ct
35	Pipes, Fittings, etc., Makers or. Eaton. Cole & Burnhain Co., 58 John. N. Y. 26 McNab & Harlin Mig. Co., 56 John. N. Y. 36 Pancoast & Maule. 22 Pear. Phila. 46 Pipe. Water and Gas., Makers or. Leighton Bridge and Iro: Works, Rochester. N. Y. 25 McNeal John & Sons, Burlington, N. J. 6 Waren Foundry & Much. Co., Philipsourg, N. J. 6 Waren Foundry & Much. Co., Philipsourg, N. J. 26 Waren Fens. Manufacture. Phila. 26 Pinue Irens. Manufacture. Buck Bres., Milliopry, Mass. 13 D. R. Barton Tool Co., Rochester. N. Y. 13 Pinnes. Manufacturers of 13	Tube Expanders. Dudgeon Richard, 24 Columbia, N.Y
	Warren Foundry & Mach. Co., Phillipsourg, N. J. 26 Wood R. D. & Co., 40) Chesnut, Phila. 36	Twist Dritts, Makers of. Morse Twist Dritt & Mach. Co., N.Bedford Mass.,, States, Gas, Water and Steam.
4	Buck Bros., Milibury, Mass. 13 D. R. Barton Tool Co., Rochester, N. Y. 13 Pinnes. Manufacturers of	Talves, Gas, Water and Steam. Junus Judson & Son. Rochester. N. Y. Peet Valve Co. Boston, Mass. Ludlow Valve Mfg. Co. Trov. N. Y. Varnishes
4	Balley Leonard & Co., Hartford, Conn	Varnishes Moller & Schumann, Marcy & Flushing Avenue Brooklyn, N. Y
31	Pinted Ware Derby Silver Co. Derby. Ut	Visco. Millers Falls t. 1, 74 Chambers, N. Y. Fisner & North Treaton. N. J. Fisner & North Treaton. N. J. How vid from Works, Buffalo. N. Y. Treaton Vise & Too. Works, 101 & 105 Duane, S. Y. Wilson Miz. Co. 3. Chambers. N. Y. Wilson Miz. Co. 6. Chambers. N. Y. Wilson Miz. Co. 6. Chicago. Estaker W. C. & Co. Chicago. K. M. Carmel, C. K. M. C. Chambers. Methodology Machine Co., 32 Certifiedt. N. Y. N. M. S. Certifiedt. N. Y. C. Certifiedt. N. Y. C. Certifiedt.
Co39	Plows. Mckle Thos. & Co., Lovisville, Ky	Trenton Vise & Too. Works, 101 & 108 Duane, B. Y Wilson Mig. Co. of Chambers N. Y Wagon and a arringe Materials.
1	South Bend Iron Works, South Bend Ind. 37 Plumbers' Materinis, Manufacturers of Everhart Jas. M., Scranton, Pa. 40 Carr Wm. S. & Co. 106 Centre, N. Y. 25	Barker W. C. & Co., Chicago. Knowles W. W., Mt. Carmel, Ct. Moon C. R. & Co., Cleveland, O.
. Y25	Fort Hele Oiggers Eureka Digger Co., 84 William, N. Y	Metropoutad Washing Machine Co., 32 Certhwidt
8	Potate Musher. Crane Robert Jr., Columbia, Pa	Metropoutan Washing Machine Co., 22 Certhedt N. V. Water Motor: Backus Bros., Newark, N. J. Water Wheels (Turbine). Alcott F. C. & Son, Mount Holly, N. Y. Welding Compounds. Schlerlot H., 22 Exchange Place, Jersey City, N. J., Welshing Machines. Robt, King, 28 Plymouth, Brooklyn, N. Y.
4	Crane te-nerr Jr., Cottumins, Ps. Power Hammers. Makers of Forsatth S. C. & Co., Manchester, N. H	Welding Compounds. Schlerlob H., 2i Exchange Place, Jersey City, N. J
	The Stiles & Parker Press Co., Middletown, Ct., 39 Pressage Blowers, Makers of. Esysteme Parking Force Co., Philadelphia	Sounds Armes & rice St. Louis Ma
4	Theoretical through the original to palescent by 37	White Lend, Manufacturers of Brooklyn White Lead Co., 99 Maiden Lane, N. 1 Colgate Robert & Co., 267 Pearl, N. V.
	Rider, Wooster & Co., Walden, Orange Co., N. Y24 Pumps, Makers of . Douglas W. & B., Middletown Conn.	White Lend, Mannineturers of Brooklyn White Lead Co., 39 Maiden Lane, N. 1. Colgate Robert & Co., 87 Pearl, N. Y. Jewett John & Sons 182 Front, N. Y. Lewis John T. & Bros., 231 S. Front, Phila., Pa. Wetherill & Bro., 3lat. below Chestnut. Phila.
	Kilvert & Tappen Boston, Mass	
	Union Mfg. Co., 96 Chambera, N. Y	Hammond W. S., Lewisberry, Pa. Wire, Manufacturers of, Cary & Moen, 281 W. 29th, N. Y. Gilbert & Bennett Mfs. Co., 223 Pearl, N. Y. New Haven Wire Works, St Cliff, N. Y. Prentiss Geo, W. & Co., Holyoke, Mass. Roberts Henry, Newark N. J. & Co., March M. S. & Co., More Miller M. S. & Co., More Miller M. S. & Co., More Miller M. & Mashburu & Moen Mfs. Co., Worcester, Mass. Trenton Iron Co., Trenton, N. & Wire Cloth.
1	Pyrometers, Brown Edward, 31i Wainut, Phila	Prentiss Geo. W. & Co., Holyoke, Mass. Roberts Henry, Newark, N. J. Townsend W. P. & Co., Pittsourgh, Pa.
eton.	Rogers H. A. 19 John, N. Y	Washburn & Moen Mfs. Co., Worcester, Mass Trenton Iron Co., Trenton. N. J. Wire Cloth.
	Atkins Bros., Pottsville, Pa	Young Oscar W., 104 Broadway, Brooklyn, N. Y Wire tinnees.
ogton 4	Griswold John A. & Co., Troy, N. Y	Wre Goods, Manidestares of, A. A. Arnold, New Haven, Conn. Belmer H. & Co., Cinchnatt, O. Corning Jasper E. 58Clff, N. Y. Estey W. S. & Fulton, N. Y. Grienleaf G. & Co., 50 Union, Boston, Mass. Howard & Morse, 45 Fulton, N. Y.
	Razor Straps, Makers of B. F. Badger & Son Charlestown, Mass.	Estey W. S., 56 Fulton, N. Y. Gilbert & Bennett Mfg. Co., 273 Pearl, N. Y. Greenleat C. & Co. 161 July 2018
	The Sprague Novethy Works, Rochester, N. Y9 & 16 Refrigerators. Lesley Alex. M., 225 W. 23d, N. Y	Wire Salls.
	Hoopes & Townsend, Philadelphia. Timme's Son Peter, 291 North 6th, Brooklyn, E. D Townsend W. P. & Co., Philadelphia.	The American Wire Nail Co., Covington, Ky Wire Kope, Iron and Steel, Makers of. Hazard Mfg. Co., Wilkenbarre, Pa
d, Va.	Rond Scrapers, Wc.	Rocbling's John A Sons. Trenton, N. J
4	Relling Mill Machinery, etc., Manufacturers of Moore sames, Cor 18th and Buttonwood, Chila	The American Wire Nail Co., Covington, Ky. Wire Kope, Iron and *tee!, Makers of. Hazard Mig. Co., Wilkesbarre, Pa. Roebling's John A. Sons. Treaton, N. J. Wooden Ware. Adams F. F. & Co., Erle, Pa. Wrenches, Manufacturers of. Austin J. & Co., 15. Liberty, N. V. Bemis & Cail Hdw. & Tool Co., Springfield, Mass., Coes L. & Co., Worcester, Mass. Coes A. G. & Co., Worcester, Mass. Girard Wrench Mig. Co., Girard, Pa. Knight Edward H., Philadelphia. Wringers.
A	I The State His Daint Co. 166 Posters N. 22	Coer I. & Co. Worrester Mass
o. Pa.	I de Distriction Co Boston Mass	Girard Wrench Mfg. Co Girard, Fa Knight Edward H., Philadelphia. Wringers Alexander J.J. Boston, Mass. The American Mathine Co., Philadelphia.

E	1.	
9	Saddlery Hardwars. Hayden & Smith, Auburn, N.)	7
4	Bandand Emery Paper. Makers of Beadef Adamson & Co., 730 Market, Phila	
7	Saws, Makers of. American Saw Co., Trenton, N. J. 29 Atkins E. C. & Co. Indianapolis, ind. 21 Boynton E. M., 80 Beekman, N. Y. 29 Jusaton Henry & Sons, Phila. 29 Peace & Hogan, Williamsburg, N. Y. 29 Wheeler, Madden & Clemson Mig. Co., Middletown, N. Y. 29	
10	Boynton E. M., 80 Beekman, A. Y	SP
35	Peace Harvey W. Williamsburg, N. Y	-
11 10 2	Benies, Manufacturers of. 12 Frandon Mg, Co., Brandon, Vt	
	Borews. Mn above Muster, Phila	
23	Borews. Makers of. American Screw Co., Providence, B. 1. 16 Sillerback J. & Co., cor. 17th and Vetango. Phila 13 Miles r'. S., 285 quarry, Phila 27 Russell & Erwin Mig. Co., New York 10 The Chicago Screw Co., Chicago, III 12	8
n 23	Bruce Geo, W., 1 Platt, N. Y	G
23 23 34 23 3	Scroll Saws. Trump Bros. Wilmington, Del	
96 24 39	Scythe Stones. Dishman F. E. New Albany, Ind. 33 Pike A. F., East Haverhill, N. H. 33 *hpfilms. Wood Themas, Philadelphia. 37	
38 39 36 38	Shovels. &c. Hussey. Rinus & Co., Pittsbun '4, Pa. 37 Iron Clad Can Co., 2) Cliff. N. 40 Muddenoro Shovei Co., 68 Oliver. Boston. 27 Old Colony Iron Co., Taunton. 87 Remington E. Sovs, 57 Reade, N. 37	1
12	Middleboro Shovel Co., 56 Oliver, Boston,	
38	Short, e.c., Spirks Thos. W., 121 Walnut, Philadelphia	I
26	Shen's (Sheep), Hildick A. B. & Co., 12 Warren, N. Y	
37	Skate Sharpenera. American Skate Sharpener Co., Selins Grove, Pa 28	1
23	Sleigha. Crosby, Gilzinger & Co., kondout, N. Y	-
23	Receives radi S., 100 South Broad St. Palla	TO 100
33	Snaps. Hold Back & Snap Co., Troy, N. Y	-
352	Manning & squier, 115 Liberty N. Y. 2 Spring Boor Sheaves. 24 Shannon J. B., Philadelphia 24 Springs. 40 Rowland Wm. & Harvey, Frankford, Phila. 40	
15 27 2	Springs	
6 40 2	Crossley H. A., Cleveland, O. 8 Steam Hammers, etc., Makers of. Bradley Mfg. Co., Syracuse, N. Y. 17 Duageon icharu, 21 Coumbia, N. Y. 38 Steam Pames, etc., Manufacturers of Betts E. & A., Winnington, Del. 40	9.4
28	Carr A., 43 Cortland, N. Y	
.39	Clayton Jas., 11 Water, Brooklyn, N. Y. 7 Crane Bres, Mrg. Co., Onloage, 111. 28 Rnowles Steom Pump Works, Warren, Mass. 35 McGowan John H. & Co., Cleck.pail. O. 39 Valley Machine Co., East Hampton, Jases. 35	
10	McGowan John H. & Co. Circirati, O	
. 3 . 35 . 4	Bidwell J. C., Pittsburgh, Pa. 40 Chester Casvings Co., Evelina, Phila Pa. 15 Flagg Stanley G. & Co., 216 & 218 N. 3rd, Phila, 40 Pittsburgh Steel Casting Co., Pittsburgh, Pa. 40	
. 4	Putsburgh Steel Casting Co. Pittsburgh Pa. 40 Steel Importers. Cart J. & Elley, & John, N. Y. Sulzbacher, Hyman, Wolff & Co., 16 Uiff, N. Y. 32 Hobson Francis & Son, 37 John, N. Y. Jonas, Mryor & Colver, sheffield, Eng. 32 Jonas, Mryor & Colver, sheffield, Eng. 32 Fictions & Co., 10 Colff, N. Y. 24 Fictions & Co., 16 Cliff, N. Y. 25 Sanderson Bros. & Co., 15 Cliff, N. Y. 25 Sanderson Geo. & Co., 15 John, N. Y. Steel (Mushet Special). Handali & Jones, 10 Oliver, Boston, Mass. 32 Kandle & Jones, 10 Oliver, Boston, Mass. 32	
.30	Jonas, Meyer & Colver, Shettleld, Eug. 32 Moss & W. 89 John, N. Y. 32 Plersons & Co. 24 Broadway, N. Y. 4 t anderson Bros. & Co. 16 Clfft, N. Y. 32 Sanderson Goo. & C. S. Loby, V. Y. 32	
27	Sanderson Geo. & Co., 57 John, N. Y	
27	Street Manufacturers. Chrome Steel Co., Brookivn, E. D	,
.35	Midvale Steel Works, Mectown, Phila., Pa. 32 Milier Metcalf & Parkin, Pittsburgh. 33 Rowland Win, & Harvey, Frankford Phila. 41 Smith, Sutton & Co. Pittsburgh. 41	000
.12 .4 .13 .18	Randali & Jones, 10 Oliver, Boston, Mass . 22 Streel Winauliacturers. Chrome Steel Co., Brookivn, E. D	1
.40 .24 .84	Steel Spiral Spiing. Manufacturers of Chattlion & Sons, 91 and 93 Cliff. N. Y. 9	١,
.13	Rogers Richard H., 45 Ann. N. Y	
. 5	Sisters. St. St. Philadelphia 17 Smith Dillwyn. 18 S. 6th. Philadelphia 17 Smith Dillwyn. 18 S. 6th. Philadelphia 17 Blake Crusher Co. New Haven. Ct	
.24	Ansonia Brass and Copper Co 19 and 21 Cliff, N. Y 9 Showed Schewe & Co Buffalo N. Y	
. 3	American Tack Co., Fairhaven, Mass	
15 28		
.26 .26 .26	Try squares, Hevels &c. Makers of Bailey Leonard & Co., Hartford, Ct	
25 6 .26 .26	Dission Henry & Sons, Phila. Thue Kapanaers, Undecon Richard, 24 Columbia, N. Y.,	
. 13	Junius Judson & Son. Isochester. N. Y	
.13	Moller & Schumann, Marcy & Flushing Avenues, Brooklyn, N. Y	
. 40	Finer & North Treaton N J	
37	Visco. Millers Falls C.5., 78 Chambers, N. Y. 25 Fisner & Norris Trenton, N. J. Fisner & Norris Trenton, N. J. 17 How "rd from Worse, Buffalo, N. Y. 108 Duane, B. Y. 6 Wilson Misc. Co., T. Chambers, N. Y. 4 Wilson Misc. Co., T. Chambers, N. Y. 4 Wingon and a crining a Minterints. 12 Moon C. R. & Corno, C. 12 Moon C. R. & Co., Cleveland, O. 12 Winshings Machines. Metropolitai Washing, Machine Co., \$2 Certified; N. Y.	
26	Washing Machines. Metropoutan Washing Machine Co., 32 Certhreft N. Y	
.11	Backus Bros. Newark, N. J	
.24	Schlerlob H., 24 Exchange Place, Jersey City, N. J., 3 Welshing Machines. Robt. King, 246 Plymouth, Brooklyn, N. Y	
.18	Semple, birge & Co., St. Louis, Mo	
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.24	Hammond W. S., Lewisberry, Pa	1
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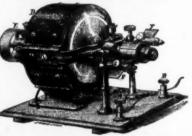
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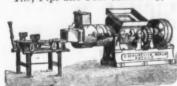
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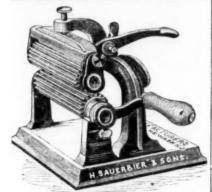


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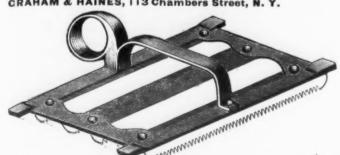
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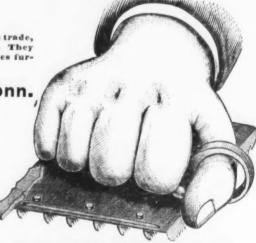
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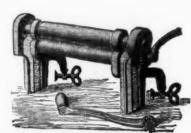


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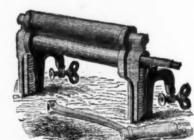


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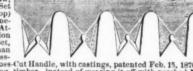
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Huid's Razor Blade. # doz 9 00 @ 11 00 Simmons'. # doz 11 00 @ 11 50	Carpet Sweepers. U 100. ——————————————————————————————————	Eureka. No.
" Double Bitted. # doz 21 00 @ 28 00 Upaerkill's # doz 12 00 @ 13 00	Aed	Empire No. No. No. Defiance K. F. M., 436
John Leverett's	fastle Leaders. Hotchkiss Sonsnet	Domestic Fit
## Stanley's Excelsion. No. 1, \$11'-00, dis 22&10 g Axes. Slood's	Cast Fron, Steel Foliats. d 'amire's	Finting 8
Common (Guy C. Hotchkiss, Field & Co.). # 5 4%c Boild Collar. Case Hardened, Chirled Box # 5 8c	Singles Coll bet gold	Keystone Po Forks. Hay, Manure
Baiances. Light or "Common "	Trace, 6)(-10-2	Plated A 1 Keed of Fruit and Enterprise M
Bancas—rated new list dis 5065 5 ron kim new int dis 2545 5	German Halter Chain dis 25 % gold German Goli dis 25 % gold	Enterprise M
Elephant	Gaivanized Pump Challs	Fry Pans Burnished, P # doz\$8 No
Gray's Ratchet	Chalk. P gross, 55c net	Gauges.
** Extra Heavy	Union Nat Uo	Wire
Swiss dis 25 s Globe (Cone's Patent). dis 20 s d	D. R. Barton Tool Co. (all kinds)	
" Yankee dis 35&10 g " Barton's	** Hart Mtg. Co., No 1 dis 60&10 5 ** Merrill	"Bee " Gimle "Eureka " G Double Cut, S
# 2 Trook 9 dis 20 5	" Witherby Tool Codis 60&10 % "Firmers, Crossmandis 60 % " dis 60 % " Buck Brossnew list dis 17% @ 20 %	Gine Pot
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Hart, Bliven & Meau Mfg. Co. dis 25&10 s	Socket Corner dis 65 @ 70 \$ Fanged Firmers, extra. dis 40 \$ Buttoners dis 40 \$	Family, How L. F. Grind Sta Sargent's Pat Reading Hard
### ### ### ### ### ### ### ### ### ##	White Orayons.	Hart Mig. Co Rick Bros Hammer Emmet Ham
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Kei Wingsy Star	Clamps. Iron, Providence Tool Co.'s, Wrt. Iron. dis 25 \$ "Adjustable, Gray's dis 35 \$ "Lambert's dis 23 \$ "Snow's dis 4465 \$ "Hammer's dis 20 \$ "Cabinet, Sargent's dis 60610 \$ "Carriage Makers', Sargent's dis 60610 \$	Huniason & I Maygole s Henry Hamm Chency s
No. 100 and an	" Hammer" dis 20 5 " Cabinet, Sargent's dis 60&10 5	Cheney 8 Verree
Yaw's telepance, dis 30 s 'Texas dis 40 s	Coffee Mills. Board and Box	Verree Magnetic Tac Warner & No Hand Cu
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oulders'. dis 25 g and Bello dis 20 g string A Chingtors.—Domestic. F doz 33—aus 20 g	French Steel	Bandles.
Bitnaf F. witners.	Berris & Cali Co.'s	Nos. Per doz \$77 Roggin's Late Bronzed Iron
old gattern. per gross, \$10.50, dis 5 5	Cablert, Sargent's. dis 606:05 Coffee Mills. Carlee Maters' Sargent's. dis 606:05 Coffee Mills. Soria and Box. dis 25 Sincrease Wilson's. dis 25 Sincrease Compasses and Dividers. dis 25 Sincrease Compasses Compasses dis 25 Sincrease Compasses Compasses dis 25 Sincrease dis 25 Sincrease Compasses dis 25 Sincrease dis 25 Sincrease Compasses dis 25 Sincrease dis 2	Bronzed Iron Wrought Che
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aniey Rule and Ressel Co	Crecibles.—Gautier & Co * No. 5%c Curling Irons. &Co * No. 5%c	Bran Awl Hickory Firm Apple
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ardage and Tire, Common. dis 75&5 \$ cash Norway Iron. dis 50&10 \$	Wood Toth (Fuller Bros.)	Hangers. Anti-Frictio
* Philadelphia (01d list) dis 0.81% s * Philadelphia (01d list) dis 6.87% s	Cackeves1½ in., 28c.: 1½1n., 33c.; 1½ in., 57c. net	Novelty
nien Nut Comparay, old list	Brass Racking	Harness :
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April 5, 1877.		THEIRC
Brass and Silver Capped. List March 1, '75 dis 40 % Lag or Common Coacn, New List March 1, '76 dis 65 % Coach. Patent Gimlet Point, List Jan. 1, 1575.dis 40 % dis 10 % Hed. List of Plain Serews. dis 10 % Machine—Flat Head, Iron, Am. Serew Co dis 10 % Machine—Flat Head, Iron, Am. Serew Co dis 10 % Machine—Flat Head, Iron. dis 20 % dis 10 % Head.	Lindsay's Patent. dis 25 % Tait's Pattern dis 15 % 10 %	MISCELLAN Common Plain Brass Pail Ears
Conch. Patent Gimiet Point, Met Jan. 1, 105-348 4 45 50 5. Red dist of Plain Screws dist 10 g Jupanned, List of Plain Screws Co. dist 10 g	Lineasy's Patent dis 28 t Tatt's Patern dis 15&10 t Set 10 t Davis 'attent times dis 15&10 t Set 10 t	Brass Door Hall. High Brass Scrap, 16 cents. Low "18 cents. Gilding, 20 cents.
Machine Round Head, Iron	Aiken's Pecket (Bright)	Gilding, 20 cents. Furnings, Filings and Chips Terms—Net casn. Intere
Wood, Beach	with Cog Wh'ls, No. 2½, smail fam'y size 63 00 No. 2, usual 66 00 Crown No. 2	daya. Piain to No. 20 inclusive, above
Hand Rail, Sargent's	" No. 3. 69:00 Climax No. 2. \$71:00 Less \$2:00 per " No. 1½ :9:00 doz. for cash	" above 3 in No4. 21, 29, 23, two cents advar Number. Nos. 24, 25, 26, four cents advar
Jack	Alkon's Pecket Bright). Alkon's Pecket Bright). With agens Universal, without Cog Wheels. "with Cog Wh'ls, No. 2%, amail fam'y size 63-00 "No. 3. Crown No. 2. "No. 3. Climax No. 2. "No. 18 "No. 18 "No. 19 "No. 2. "No. 2. "No. 2. "No. 2. "No. 3. "No. 2. "No. 3. "No. 2. "No. 3. "No. 3. "No. 3. "No. 4. "No. 54-04 "No. 54-04	Nos. 24, 25, 26, four cents advat Number. Above No. 28 special rates.
German Grain doz 14 00 from list	Sherman, 544h) Kureka, " 60'0) Redance, with 58'00	Plain ¼ ix ch
Slood's Excession and Grades 10 50 Glassical Street 10 50 From list. 15 00 From list. 15 00	** No. 22 ** ** ** ** ** ** ** ** ** ** ** **	Prices. Fancy Tubing to No. 20
Bush dis 20 % Sevine Snaths dis 20 % Sevine Snaths dis 20 %	No. E, for set tubs. 72 00	Prices. Fancy Tubing to No. 20. English, Scotch 22d Extra Parto No. 20. Tubing Sawed or Cut 2 to 4 syance on List.
dis 35de dis 75de 10 dis 40	Stamped Tin Ware. dis 20 5	Add to 2 cents 1/2 cent for eac under two feet.
Pruning	Planished Tin Ware dis 20 %	Plain ZINC TUB
Second S	METALS.	Fancy. Scotch and Extra Patterns. GERMAN SILVE
Russell's Anti-Friction dis 50-22 % Russell's Anti-Friction dis 50-22 % Stidling Shutter, R & E. List. dis 50-5-22 %	IRON. DUTY Bars, 1 to 1% cents per lb., Sheet, Band,	
Sargent's List	IKUN.—DUTY Bars, Itoly cents per lb. Sheet, Band, Moop and Scroll, Ity toly cents per lb. Provided, that none of the above Iron shall bay a less rate of duty than 35 per cent. Pig. 57 per ton; Polished Sheets, 3 cents per lb.; Wrought Scrap, 48 per ton; Cast Scrap, 46 per ton. Railroad, 70 cents per 100 lbs. Boiler and Plare. Ity Cents per lb.	16 n 16 n 18 · · · · · · · · · · · · · · · · · · ·
Ames dis 50 % dis 30	\$6 per ton. Railroad, 70 cents per 100 lbs. Boiler and Plate.1% cents per lb. Pig tron—American.	TEEL-DUTY: Bars, Ingots at 7 cents perlb., or under, 2; not above 11, 3 cents per lb.
MiddleDoro Shovels and Scoops. dis 204.7% 5	Plafe 15 cents per lb. Pig Irea - American. Pton, \$20 00 (6) Foundry No. 1 Pton, \$20 00 (6) Foundry No. 2 19 15 166 Cray Forge	not above 11, 3 cents per lb. and 10 % ad val. Railway Ba way Bars, in part Steel, 1 cen
Iron and Brass read, R. & E. Hart a	Glengarnock	and 10% ad val. Railway Ba way Bars, in part Steel, 1 cen Metal cemented, cast or ma mer or pneuma. c process, scription, shall b classed as
Square Frames, Round Cornered, by casedis 65&10 %	Coltness. 27 25 Bar Iron. 2:10c @ 2:25c.	Tooi. American Ca Spring. Homogeneous.
Spokes North Carolina Handie Co. dis 20 g	Ralis	Machinery (round and seuare)
Foliage	Scrap. 19 (0) og 20 (0) Scrap. Wrought Scrap, from yard 26 (0)	File. Sheet. Saw Plate, mill and mulay Saw Plate, gang and X cut circular as to size
Bonney,s	Common Iron. Bar Iron from Store.	Chrome
Douglass'	% to 2 in, round and square	Tool Tool, extra fine Spring Machinery
Basting. dis 15 4 Britannia dis 55 @ 60 € Britannia dis 55 5 €	% to 2 in round and square} # 15 2 3c 1 to 6 in. x ½ to 1 in	Gun or Homogeneous
Derby Silver Co. dis 40&5 % Rogers & Bro., A 1 dis 40&5 % Reed & Barton. dis 40&5 %	Band → 1 to 6 x 12 to 8-16	Best Cast
Rogers Cutlery Co	Plow size Sheet Fon. Common American. American.	Swaged, Cast
Tin (P. S. & W.)— Teas. Tables. 2-78 Teas. Tables. Teas.	Nos. 10 to 30	German Steel, Best
Tn (Cowles Hdw. Co.)	28	Bound Machinery, C Swaged, Cast. Best Double Shear. Blister, 1st quality. German Steel, Beet. 2d quality. German Steel, Beet. Sheet Cast Steel. "" 2d quality.
Pouglass	Sheet Fon. Common R. G.	File Steel, Fiat and S Round Square and Round. Mill Taper to 4 inch Taper 3 and 24 incl
Stocks and Dies.	Patent Platfshed	ANTIMONY.
Sand Stone	Am. Cold Rolled	LEAD-DUTY: Pig \$2 per it
" Slips. No. 1, % to 60c net Arkansas Stone. No. 1, % to \$123 net " Slips. No. 1, % to \$220 net	5 5½ 6 7 inch. \$250 8:50 4:50 5:25 6:50 per doz. RUSSIATRON. 7 tnch.	American
(rindstones, Family, Loring's	134 5 536 6 7 tnch. *5*00 700 950 12*00 14*00 per doz. COPPER-Duly Pig. Barand Ingot 5c.; old copper,	Bar
Stave Folian	COPPER -Duy Pig, Barandingot Sc.; old copper, 4 cents # \$: Mathifactured (including all articles of which copper is a component of chief value) 45 \$ ad valorem.	Bar
Squares	which copper is a component of chief value) so x ad valorem. American logot. American logot. American logot. American logot. Brazlers Copper, ordinary sizes, 16 oz. and over a quare toot. Brazlers Copper, ordinary sizes, 16 oz. and over 12 oz., per aquare foot. Assert logot. Brazlers Copper, ordinary sizes, 16 oz. and over 12 oz., per aquare foot. Assert logot. Brazlers Copper, 12 oz. per square foot. Assert logot. Brazlers Copper, 12 oz. per square foot. Assert logot. Brazlers Copper, 12 oz. per square foot. Bot. Bot.	2 in. P " 1½ in. P " 1½ in. P "
	Square toot	2 in. S
Dission's Try Squares No. 1	straters Copper, 12 oz. per square foot35c. 'Circles less than 54 inch in diameter35c. Circles, 84 inch diameter and over38c4	M. P. U. BABBITT :
Tricks, Brads, &rc. List of January 1, 1876. Tricks, Brads, &rc. List of January 1, 1876. Tricks, Half Weight, American	Segment and Pattern Specis. Sec. Locomotive Fire Box Sheets. 22c. Sheathing Copper, over 12 oz. per sq. ft. 31c. 4	SOLDER
ruli dis 10 % dis 10 % for cash Leatner Head dis 10 %	Boit Copper 32c. * 5	per 100 lbs. Silesian, cash
	szceed % os. to the square foot. sheathing Copper, tinned on one side, by the case	TIN-DUTY: Plates, Sheets, per lb.; Electro-galvanized Manufactures of, not enum; Bars, Block and Figs, free. Ba
Shoc Nalls— Shoc Nalls— She and longer, Sc.; 3½-8ths, 9½c. 5 5, dis 10 5 Trunk, Clout and Finishing Nalls— 25 25 1 1 14 in. and over. 26 27 15 13 11c. 11c. 11c. 11c. 11c. 11c. 11c. 1	Tinning Sheets, ordinary sizes 2%c. F sq. ft For tinning both sides double the above amount.	per cent.
Double Pointed Tacks	O'NHILL'S PATENT PLANIBRED COPPER. 44 and 16 oz. and heavier	English TIN PLATES, CURE I C 10x14)
Yes' Tap Borers. dis 10&10 & 25 £ Sate prise Mfg Co. dis 25 £ Tapes, Measuring.	7 in., 14x52. 8 in., 14x56. 9 in., 14x60 is and 16 oz. and heavier	1 C 10x14 Prime Charcoal 14x20 1x12 Prime Charcoal 12x12 Prime Charcoal 14x20 14x2
Double Pointed Tacks	14 and 16 oz. and heavier	14x20) D C 1256x17 " D X 1256x17 "
Thermometers. The Case	Brown & Sharp's auge the Standard for Metal; Old English Gauge the Standard for Wire.	For each additional X add
American Tea Trav Co	DEASS MANUFACTURERS' PRICE LIST. January 1, 1877. Cash prices for Roll and Sheet Brass. For less quantity than 10, pounds, add 3 cents per pound.	1 C 10x14) 1 C 12x12 7:25
All Iron	tity than 10, pounds, add 3 cents per pound. HTGH BEASS All Nos. not thinner than to No. 28, wider than 2 in, not wider than 14 in	Prime Char
P. S. & W	All Nos to No. 38, inclusive, and widths over 24 to	I C 14x20 \$6.75 @ 7.00 I X 14x20 \$6.75 @ 7.00 I C 20x23 14.00 @ 14.50 IS I X 20x28 19.50 I C 20x200 21.75
Trusps: dis 25x2 s Game, Newhouse dis 25x2 s	\(\sigma_c\) \(\pi\) advance on each No. above Nos. 28 to 38, in-	C 20x200 21-75 C 14x20 M F. Brand ZINCDUTY Pig or Block 254 C. B.
Patent Choker (Union Nut Co.)	All Brass thinner than No. 33 is Platers' Brass, at50c Sheets 24x49 in., and all sheets cut to particular sizes and lengths under 30 in., in width wider than 2 in. 37c	2¼c. ♥ b. Sneet
* Square, *	Sheets 24x8 in., and all sheets cut to particular sizes and lengths under 30 in., it wildth wider than 2 in. 51c Printers Rules	Paper Stock, Ol
Catch-en-alive. P doz \$4 (1) net Trowels. Lothrop's Brick and Plastering. dis 10 \$ Dission: Brick and Plastering. dis 20 \$ 4 5 0 5	d over 14 20, 4450 48c	(Dealers' Sellis
Trovelle. Lothrop's Brick and Plastering. dis 10 s bothrop's Brick and Plastering. dis 20 s Plastering. dis 20 s Pence's Plastering. dis 20 s Rose's Brick. dis 10 s Brick. gold, dis 10 s		Canvas linen cotton, No. 1 No No No No No No No No. 2 No. 2 No. 2 Colored No. 2 No. 2.
Worrall's Brick and Plastering dia 20 5	Four cents # 5 more than High Brass. Gilding Metal #c, # 5 more than High Brass. In Bars	Colored.
Triers. dis 25 X Portion Window). Mickel and Gilt. per dozen \$1600 \(\) 1900 Ylaca. Alto 161 lbs. 1810 and Gilt.	Metal, in width 2 in. to 1/2 in. to No.28, inclusive, ic. per	Soft wooiens
Solid Box, Trenton	Metal, in width 2 in. to 1 in., thinner than No. 28, 2c. per b. advance. Metal, in width 1 in. to 16 thinner than No. 28, 3c. per b. advance.	Tate Butts
Viacas, Soid Box, Trenton	advance. Metal, in width 34 in. to 14. inclusive, not thinner than No. 28, 2c. per 25. advance. Metal, in width 34 in. to 34 thinner than No. 28, 5c. per 25.	Oakum junk, No. 1 No. 2
Sargent's	advance. Metal, & in. in width and less, ioc. per lb. advance Any of the above widths cut to particular lengths, add	Tarred Shaking
Merrill's dis 15 % Fi*her & Norris dis 15 % 10 % Buffs dis 25 % Stayons' dis 25 %		Hard White Snavings, No. 1
Stovens	4 per cent., 12 in., to No. 26	White Court Cuttings, at paper mailed in the mailed in mailed in mailed in a transfer mailed in the
Wheel Barrows. Canai (Pugsiey & Chapman)	more than if he \$2-25 per h	Newspaper Stock
Wheel Barrewaman)	in and 2c, per B, on each No, thinner than Nos. 26 to 36	Pure Manilas.
Brass and Copper	Al. German Silver thinner than No. 36 is Platers' at 90c. per B. additional. German Silver Scrap one-third less than net price of 12 in. Market Metal. German Silver Turnings, Filings and Chips, balf the price of Scrap.	Binders' Board Cuttings
Coppered	Chips, half the price of Scrap. BRASS AND COPPER WIRE, Gild'g and	Straw Board Cutrings Woolen Tailor Clips. Satinet Tailor Clips. Copper. Yellow metal. Brane light.
Timed Nos. 0 to 18	High Brass. Low Brass. Cop'r. No. 0 to 20 100 to 24 100 to 25 100 to 26 100 to	Yellow metal
Gaivanized Telegraph, Nos. 8 and 9 h b to be belivanized Telegraph, Nos. 10 and 11 h b loc	No. 22	Brass, heavy. Heavy Composition. Old lead, solid. Tea lead.
Athealed Fence. Nos. 8 and 9	No. 26. 44 48 55 No. 27. 46 50 57 No. 28. 49 58 61	Yea lead. Zinc. Pewter, No. 1. Pewter, No. 2. Spelter Wrought fron Machinery it OB. Light Iron
Well Wheels.—Rivised list	No. 22. 96 40 47 No. 23. 97 11 48 No. 244* 99 43 59 No. 244* 159 No. 244* 159 No. 245* 159 No. 25* 16 No. 25* 16 No. 27 No. 28 No. 28 No. 28 No. 20 No. 20 No. 20 No. 21 No. 21 No. 21 No. 21 No. 22 No. 30 No. 31 No. 31 No. 31 No. 32 No. 32 No. 32 No. 33 No. 33 No. 33 No. 34 No. 35 No. 36 No. 37 No. 38 No. 38 No. 39 No. 30	
Steel Music Wire, Nos. 12 to 27. B 16c Jund S Picture Wire dis 50 g Cloudes Line Wire, Guyvanized per coil 45 a 50c per	No. 32. 45 47 41 No. 38	Burnt Iron
	Flat, Square and Half Round Wire, 5c. per B advance	Paints, Oi
Wrenches, American Adjustable	on Round Wire. Fancy Wire not less than 10c, per B. advence of	~
Wrenches, dis 45 g American Adjustable B' New List, May 1 6 dis 45 g American Adjustable B' New List, May 1 6 dis 30 g List Colling & Co. 2 dis 30 g Colling & Co. 2 dis 30 g Colling & Co. 2 dis 30 g Co. 3 dis 30 g Co	on Round Wire. Fancy Wire not less than 10c, per 5. advance of Round Wire. Brass Rods, No. 2 and larger, not less than 2 feet lengths, 40c.	Palpte Bisck lawn Coach Painters
Contins Line Wire, Gaivanized per coil 45 6 Soc. net Wirenches. American Adjustable "B" New List, Mart 1, "6" dis 30 s Easter's Adjustable "B" New List, Mart 1, "6" dis 30 s Coiline & Co. s dis 45 s dis 30 s Coiline & Co. s dis 45 s Cose Genutse. dis 30 s Coiline & Co. s dis 45 s Cose Genutse. dis 50 s dis 45 s dis 45 s dis 50 s dis	on Round Wire. Fancy Wire sot less than 10c, per B. advence of Round Wire. Brass Rads, No. 2 and larger, not less than 2 feet lengths, 4/c. Wire straightened and cut, smaller than No. 3, and not less than 2 feet lengths, 40c. Wire and Rods less than 2 feet lengths, special rates. Twelve cents per B. extra for spooling on 1 B. spools.	Patpte

	7	(H)
	Lindsay's Patent	Common 1
	Lindsay's Patent	High Brass Low Gilding, 20 Furnings, 1 Terms1
	" with Cog Wh'ls, No. 214, small fam'y size 63:00	daya.
	Climax No. 2. \$71.00 Less \$2.00 per No. 136 9.00 doz. for cash XXX Universal No. 2 71.00 before ship-	Nos. 21, 22, Number. Nos. 24, 25, Number.
	Crown No. 2. usual 66 00 1700	Above No.
	Household, no Cop Wheels. 54 00 Sherman, 54 100 Sherman, 65 100 Rureka, 66 100 Reilance, with 68 100 Novelty, No. 10, with Cog Wheels 68 10 Novelty, No. 2, 66 10 No. 2, 70 10 Excelsion, No. A, with folding bench 80 10 No. E, for set tubs 72 00	All Mandre Prices.
	Minmand Tin Wore.	to No. 20 Tubing Sa vance on
	Common Stamped Ware. dis 20 g Stamped Deep and Retinned Ware. dis 33% g Japanned Tin Ware. dis 20 g Planished Tin Ware. dis 20 g	Add to 2 c under tw All Mandr pound ac
	METALS.	Scotch and
	IRON.—DUTY Bars, 1 to 1% cents per lb Sheet, Band, Hoop and Scroll, 1% to 1% cents per lb. Provided, that nome of the above from shall nay a less rate of duty than 35 per cent. Pig. \$7 per ton; Pollshed Sheets, 3 cents per lb., Wrought Scrap, \$8 per ton. Last Scrap, \$6 per ton. Ealfroad, 70 cents per 105 lbs. Botler and Plare, 1% cents per lb.	6 ·· 9 · 6 · 12 · 6 · 6 · 16 · 6 · 18 · 6 · 18 · 6 · 20 · 6 · 6 · 6 · 6 · 6 · 6 · 6 · 6 · 6 ·
	Foundry No. 2	not abov
	Glengarnock 800TCH 25 (8) 68 23 60 Fgilmton 24 75 69 25 00 Carabroe 27 25 Bar Leen 28 100 68 24 75 69 25 00 Cotness 27 25	way Bar Metal ce mer or p scription
-	Patie	Spring Homogene Tire Machinery
	Iron, at mili.	Machinery File Sheet Saw Plate, Saw Plate,
	Bar Iron from Store.	Tool Tool, extra
	Refined from \(\) \(\	Machinery Hammer Gun or Ho
	- wedish from.	English
	Ordinary sizes	41 j
	Nos. 10 to 30. \$\ \partial \text{Pib} \ 314 \\ 21 to 24 \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	German St de Sheet Cast
	21 to 24. 35/c 43/c 25 to 266. 35/c 5 c 27. 4 c 5 c 27. 5/c 28. 5/c 21 to 24. 5/c 21 to 24. 5/c 21 to 24. 5/c 21 to 25. 6/c 21 to 25. 6/c 21 to 26. 6/c 25 to 26. 6/c 26 to 26. 6/c 27 t	File Steel,
	Patent Platished A, 11c.; B, 9.5c. is in tussia, Nos. 8 to 16 is in 1254 @ 13c Stained. No. 1 12c	ANTIMO
	One piece Corragated Sheet Iron Kibows. OHAROOAL IRON. 5 5 5 6 6 7 Inch. 8259 850 450 5°25 6°50 per doz.	per ib : I Spanish German R English
	#USSIA THON. 434 5 5 5 6 7 Inch. 55:00 7:00 9:50 12:00 14:00 per doz.	American, Bar Pipe Tin Lined
	COPPER-Duiv Fig. Barand Ingot Sc.; old copper, 4 cents # \$; Matufactured (including all articles of which copper is a component of chief value) 45 % ad valorem. American Ingot. \$ 20 @ 20%c	Shot
	Highs " MEATHING. BEAZIERS COPPER. BOLTS. &c. Braziers Copper, ordinary sizes, over 18 oz., per	11/4 in. P 11/4 in. P 11/4 in. P
	Braziers Copper, ordinary sizes, 16 oz. and over 12 oz., per square foot	1% in. S h. P. U A., 25c.;
-	Circles, 84 inch diameter and over	SPELTI per 100 lb Silesian, ca
	No Copper is Sheathing except 14x48 nches, and not to succeed 34 oz. to the square foot.	TIN-DU per lb.; Manufac
	Sheating Copper, timed of old side, by the Case. Case. 66. \$\P\$ sheet For less than a case (see Side) side (Bars, Blo per cent. Banca Straits
	14 and 16 oz. and heavier	English 1 C 10x14) 12x12 14x20)
	4 and 16 or, and heavier	1 X 10x14 12x12
	14 and 16 oz. and heavier	D C 12 1/2 11 D X 12 1/2 11 For each
	English Gauge the Standard for Wire. BRASS MANUFACTURERS' PRICE LIST. Cash prices for Roll and Sheet Brass. For less quantity than 101 pounds, add 3 cents per pound.	I C 10x14) I C 12x12 } I C 14x20 }
	All Nos. not thinner than to No. 28, wider than 2 in., not wider than 14 in	I C 14x20 I X 14x20 I C 20x23 I X 20x28
	All Nos, to No. 28, inclusive, and widths over 20 to 30 in. inclusive	I C 14x20 M
-	Clusive. All Brass thinner than No. 33 is Platers' Brass, at50c Sheets 24x48 in., and all sheets cut to particular sizes and lengths under 30 in., ie width wider than 2 in 37c	ZINCD
	Circuia: sheets, in diam. from 4 in. to 14, inclusive 41c	Paper
	44 (4 40 In	Canvas line
	Four cents * * more than High Brass. Gilding Metal * 8c, * * more than High Brass. In Bars. Platers' or Gold Metal Sawed. Fland or Folished. Soc	White tine
	y Planed or Polished	Mixed woo Soft woose Sunny bag Jute Butts
	m. advance. Metal, in width 1 in. to 1/4 thinner than No. 28, 3c. per m.	Kentucky Waste pap Rope cutti Kentucky
	Metal, in width 1/4 in. to 1/4. inclusive, not thinner than No. 28, 2c. per 2b. advance. Metal, in width 1/4 in. to 1/4 thinner than No. 28, 5c. per 2b. advance. Metal, 1/4 in. in width and less, 10c. per 1b. advance	Grass rone Tarred Sha White Con
	advance, Metal, & in. in width and less, ioc, per lb. advance Any of the above widths cut to particular lengths, add Tc. per pound. GERMAN SILVER MARKET METAL, AND WIFE. MARKET Metal. Wire.	Hard White
-	4 per cent., 12 in., to No. 36	White Shav Mixed Shav Imperfection
	more than 10 ms., \$2.25 per m. Advance 2c. for each additional in., in width above 12	Newspaper Prints Pure Manil
	Al. German Silver thinner than No. 36 is Platers' at	Bogus Man Commons Binders' Bo Straw Boss
	in. Market Metal. German Silver Turnings, Filings and Chips, half the price of Scrap. BRASS AND COPPER WIRE. Glid'g and	Woolen Tu Satinet Tai Copper Yellow me
	No. 22 % '40 '47	Brass, heav Heavy Cou
	No. 244 99 43 50 No. 25 42 66 58	Zinc Pewter, No
	No. 28. 49 58 60 No. 29. 52 56 68 No. 30 55 59 60 No. 31 59 66 75	Wrought ir
	Ro. 32. 67 47 19 No. 38. 67 71 90 No. 34. 71 75 100 Spring Wire 2c. per b. advance. Flat, Square and Half Round Wire, 5c. per b. advance on Round Wire.	Light Iron Stove plate Burnt Iron
	Flat, Square and Half Round Wire, 5c. per B advance on Round Wire. Fancy Wire not less than 10c, per B. advance of Round Wire.	

Common Plain Brass Pail Ears	E
High Brass Scrap, 16 cents. Low "18 cents. Gilding, 20 cents. Turnings, F'lings and Chips the price of Scrap.	0
Plain to No. 20 inclusive, above ½ in to 3 in \$0.00 above 3 in \$0.00 no. 3, 12, 23, two cents advance on List for each Nounber. Nounber. No. 34, 24, 26, four cents advance on List for each About No. 28 appelair rates.	MOB
Plain is it co	8
Frieds. Famey Tubing to No. 20. English, Scotch and Extra Patterns Famey Tubing 48c English, Scotch and Extra Patterns Famey Tubing 50c Tubing Sawed or Cut 2 to 4 feet long, 2 cents advance on List. Add to 2 cents 15 cent for each additional cutting under two feet.	-
All Mandrel Drawn Tubes under % in., 25 cents per pound ad ance. ZINC TUBING.	1
Scotch and Extra Patterns. 31 4 Per cent	1
9 1 100 122 4 120 16 4 123 16 1 144 175 185 175 185 175 185 175 185 175	3
*TEKL—DUTY: Bars, lugots, Sheets and Colls, valued at 7 cents perib, or under, 2½ cents; over 7 cents, and not above 11, 3 cents per 1b. over 11, 3½ cents per 1b. and 10% ad val. Rallway Bars 1½ cents per 1b. Rallway Bars, in part Steel, 1 cent per 1b. Provided, that Metal centented, cast or made from iron by the Bessener or pneuma. c process, of whatever form or dwacription, shall b classed as	9 91
Tool. Sign Cast Steel	-
	1 000
Tool, extra une. 40 (as 52e Spring. 40 (as 52e Spr	1
English Nirel payable in gold, het. # b 17½c "Best Cast. 1 ½c 1½c "Extra Cast. 1½c 1½c "Bound Machinery, Cast. # b 10½ @ 11½c "Best Double Shear. 19½c "Blater, lat quality 14½c "2d quality 13 c German Steel, Best. 11½c	
German Steel, Best. 15c	
Sheet Cast Steel, 1st quality	
" Taner 3 and 2 1 Inch " 18c	
LEAD-DUTY: Pig 12 per 100 lbs. : old Lead 12 cont	
Per D. Pipe and Sheet, 2% cents per D. Pipe and Sheet, 2% cents per D.	١
FRED. ADEE & CO.'S PATENT TRAPS 4 in. P	
2 III. S	
N. P. U	
per 100 Iba. Silesian, cash	
TIN-DUTY: Plates, Sneets, Tagger and Terne, 1'1c. per lb.; Electro-galvanized Plates, 2 cents per b; Manufactures of, not committed, 35 per cent. ad val. Bars, Block and Pigs, free. Banca, subject to duty of 10 per cent. Banca	
1 C 10x14 Prime Charcoal	
X 10x14 2x12 Prime Charcoal 99.75 @ 10.00 12x12 14x20 D C 125x17	
COKE TIN PLATE. 1 C 10x14 1 C 12x12 7-25 7:0 6:50 @ 6:75 1 C 14x20 7-25 7:0 6:50 @ 6:75	
TERNE PLATE. Prime Char. 2d qual. Coke. I C 14x201678 @ 7:00 6:50 6:00 @ 6:25 I C 29x2314:00 @ 14:50 15:00 @ 13:50 12:00 @ 18:00 I X 29x23	
ZINC.—DUTY Pig or Block, \$1 50 per 100 lbs. Sheet	
Paper Stock. Old Metals, &c.	1
-	1
Canvas linen 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
3 6 6 7 7 7 7 7 7 7 7	
White Couar Cuttings, all paper	
Soft % No. 1. 6 6 White Shavings, No. 2. 5% White Shavings, No. 2. 5% White Shavings part white 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	•
Newspaper Stock 3 Prints 1½ € 2 Pure Mantlas 2½ € 2½	
Binders Board Cuttings 1% (a)	
Yellow metal 1354 135 145 <	
Pewter, No. 1	
Stove plateper ton \$115) Burnt Ironber ton \$500	
Paints, Oils, etc.	

			-	-	
time Proseton fela to hard					-
Blue, Prussian, fair to Dest	Chair				- 160
	Block. Drycr, Patent, Am'n. Knglish.		cans, 1	geck k	eg
Brown, Spanish	Flocks	*** ***		1C.;	
" Van Dyke	Frostings Glue, White Sheet Glaziers Points, Zine				G Aug
Green, Carome	Sheet				ale
Green, Chrome	Glaziers Points, Zinc				
n oil. 30c 45c					
	Shellac, English.				430
Red Lead, American85c	Litearge				91.0
14c	runnee Stone, selected Lump	B		0.0 1	4 00 00
or Jrdian, dry					
Rose Pink	in tulk				.2%0
Sienna American, Kaw	Spirits Turpentine				400
** Rarut	Whiting. spanish				** 160
" Raw " 15 66 20c Cmber, Burnt	Glas				
	FRENCH WINT	low o	LASS.		
11 Now	· Prices current pe	rbox	of 50 fee	et.	
	Single 7				
Vermilion, Chinese 1 00, gold	FIZES.	Int.		-	4tn.
Trieste	6 x 8 to 10 x 15 11 x 14 to 16 x 24	\$ 7:50 9:50			5:75
Waite Lead, American, pure dry	1.13 x 22 to 20 x 50	10:75	9-15	9:25 8:75	6.7
Waite Lead, American, pure dry 9%c to oil 10c White, Paris, English, prime the bis 2% & 3%c	15 x 36 to 21 x 90	15.52	10.75	9:00	1
Yellow Octire, French	26 x 28 to 24 x 26	13:00	11:50	9:75	
	26 x 46 to 30 x 50	15/(0)	14'(0)	11:25	
	30 x 51 to 30 x 54 30 x 51 to 24 x 6	16:00	11 50 15 50	13:59	
Zinc White American No. 1 der	1.34 x 58 fo 34 x 60.	3.92-13 .	17-25	15:00	
1, in oil	96 x 50 to 40 x 60	20 75	18:75	17725	1
1	Double '				
Gue.	SIZFS.	184.	2d.	Sd.	ith
Linaced Raw F gal. casks, 66c, bbl., 67c	6 x 8 to 10 x 15		\$11:00	\$10:00	8 9-25
Whale, Crude	11 x 14 to 16 x 24 18 x 22 to 20 x 30	13.75	12.50	14:75	10.20
Whale, Crude	15 x 3 · to 24 x °0	19:25	17:25	14:50	
Sperm, Crude 1.60	26 x 28 tG 24 x 36	51.00	18 50 21 25	15:75	
Dieached	1 26 X 46 LO 20 X 50	24'00	22:50	18:00	
Seal, Extra Refined	90 v 50 to 30 v 54	130 - PR	23-25	19:25	
" Boring	30 x 56 to 34 x 56. 34 x 58 to 31 x 60.	19-25	25:00	21.25	
Cotton Seed, Crude 4 681	30 X 60 to 40 X 60,	22.52	80.00	28.75	
White White	Sizes above 10 x 60 - 10 00 p	er box	extra f	OF CVET	y the a
Nestsfoot. Winter	An additional 10 per cent. w	all be	charged	for all	Glac
Natural Lubricating 38c @ 40c	more than 40 inches wide.	11 817	es abov	e 52 Ine	hes in
Natural Lubricating	leagth, and not making more be charged in the 84 united in	than t	si unite	d mehe	s, will
Beuzine W gal. 16c	Discount 50& 15 %.	CIRCO C	HOCKES.		
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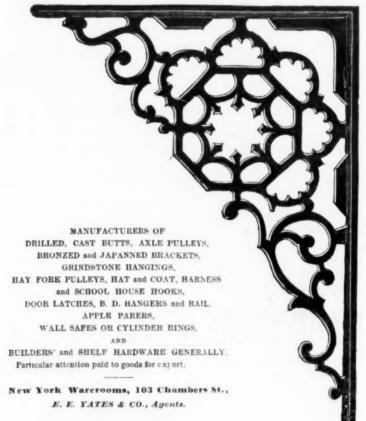
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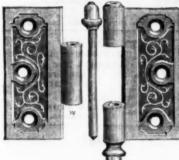


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Bay State Parer, C	orer	and Sh	cer		80	12 50
Other makes	0101	MARKO 1/00	oct		49	7 50
Lots of 5 to 25 doz						1 110
Axes.	eres estr	Ocases &	11061			
Mann's (according	to s	weight	Pa	r dos 4	in ou	a 0 m
Dad Indian H	4.0	44	/ 4 0		10 80	3 9 80
Red Chieftain	0	0.0		0.0	11 00	@ 10 (0
Hunt'e	64	0.61		0.0		@ 11 50
Augers and Aug	er B	IEm,-				
Benjamin Plerce.					dis 35	(a 49 %
Benjamin Pierce. Douglass' & Ives' Connecticut Valle Coog's Bits	y Au	ger Bit	8	d1	50 @	dis 45 % dis 50 % 50 & 5 %
Bates' Nut Auger	B			dita	40 €	10410 %
Jennings' Bus Pares' Nut Auger Dougless' & Ives' Wetrous Ship Au Bonney's Pat. Hol Stearns' Patent Ho	Aug	ers		******		din 49 %
Bonney's Pat, Hol	low /	Angers			. Hrs.	258:10 %
Stearns' Patent He	ollow	Auge	ro		dts	25&10 9
Bainnces.						
Light or " Commo	Balau	ces				dia 23 %
Bells.—Bevin Bros Hand. Common Swiss Pattern Han Conneil's Door E Gt. Western & Ke	d Be	ky Co	w, ne	w list.	. dis	0 66 75 % 018 50 % 50&10 %
Boring Machine	81	lates 1	Mfg. (io., cor	IX) -	
Boring Machine plete with auge Douglas Mfg. Co. Common Boring Anguiar						
Boits.—Eastern Co Western Philadelphia Coleman Wrought Shutter,	arring	re Bol	to	d	8 73 @	75&5 %
Western	40	86	¥ 0 + 0	dra find	1100	dis 75 %
Coleman	4.0	4.8	****	.dia 60%	k10 @	60&20 S
Wrought Shutter,	, Stan	ley		di	8 50 @	50 at 10 %
Braces.—Barber's Packus Bartholomew's A	meric	an Ba	11	aiı	di 50 @ dis	8 40&5 % 50&10 % 20&10 4
Бропага	Tolmi	*** - *				118 50 %
ButteCast Fast	JOIR	Bros	d	di	n 30, 13 n 40, 13	366 10 S
Butts.—Cast hast Cast Loose John Acorn, Loos Acorn Mayers and Luli & Porter's : f Wrought Loose F Table H Narrow Loose J	e Pin	2010		di	50, 12 a 45, 12	36&10 %
" Acorn	Parili	ment.		di	5 40, 13	216810 %
Lull & Porter's (P	hila.	Hing	28	du	65 @	65 1/10 %
Wrought Loose P	inges	and F	tank l	Flane		8 40&5 %
" Narrow.	rullica			c smline.		6 40465 %
" Loose J	omt.				di	a 40&5 %
Blind Butts.				Ale	70.0	20 11 10 -
Parker. Parker. Buffalo Hardward Clark. Shepard Garretson.	e Co.			die	60 @ 60 @	60&10 % 60&10 % 60&10 %
GarretsonGerman	Lance	or and	Coll		910	00W10 %
Calventred Phillip						et 10 ve
Best Proof Coli C	hain	01/		ma.		
W D 12	9	de	8	7.16	738	7c gold

By the cask, 560 lba., %c per lb. less Common Chala. %c per lb. less.	E
Ohtsels. Socket Framing dis 60, 10&10 g Socket Firmer dis 60 @ 60&10 g Tang dls 40 g Reary's Framing and Firmer dis 20 g	F
Custers.—Iron Bed dis 40&10 @ 50 % Porceiain Wheel Bed. dis 50 & 10 & 50 % Iron and Brass Wheel Plate dis 50 & 50&10 % Porceiain Wheel dis 50 & 50&10 %	H
Coffee Mills.—common Box and Sidedis 25 g Patent Box and Side	Si K
Cutlerv.—American Pocket (best)dls 30 @ 83% % Landers, Frary & Clark, J. Russell & Co. and Lamson & Goodnow Mfg. Co. Manufacturers' net prices	
Brawing Knives Hart Mtg. Cu6 dis 60&10 @ 60, 1p&10 s Adjustable Handis dis 10 @ 15 g Beatty dis 15 @ 20 g	L M M
Fyr Pans. Tinned	CH
Piles	PRS
Fluting Biachines. Mrs. Knox-4 in. rolls	
Hammers, Yerkes & Plumb's	8
Verce. dis 20 © 35 \$ Batchets. Beatty s. dis 20 © 35 \$ Shingling and Half { \$\frac{1}{N}\text{doz}. \$\frac{1}{12}\text{0} \text{7-20} \text{7-25} \text{80} \text{20} \text{3 s} Ferkes & Plumb.	8777

Till and Cupboard Locksdis 25 % 5 @ 25, 5 & 2 %	#8 M # 90 W 100 W
A marken Padlocks (ils 231/ @ 231/45 #	Sheets So So So So So So So S
Scandinavian Pad Locks.	Babbitt Metal W W 1
Seandinavias Pad Locks. Seandinavias Pad	Iron Wire-Bright and Annealed
No 59 59% 60 60% 61 61% 5 50&15 h	Coppereddis 4736
38 doz\$18'00 18'00 22'00 22'00 /	Tinneddis 85
NO 62 62% 68 68%	Tinned Broom, Nos. 20 21 22dia 40
United States Lock Co	Chesthing 14 @ 18 ov
Trunk Locks	Copper—sneathing 14 (5 10 02 # B 3)
Lanterns, -Square Candie and Oil	" Boiler Sizes # 15 35
Chappe for Oll	Bottoms 2 5 5
" Kerosenedis 10 %	Bolta W % 32 @ 3
Tubular Lanternsdis 10 \$	Bottoms
Mattecks,-Long and Shors Cutter	Mhoor Ivon.
	13 Common
Pennsylvania Patterndis 15 \$	24 Common 3
Moiasses Gates.	26 Common
Reference Mg. Co. s Measuring Faucets	. Planished A 1
Stebbins Gates dis 62 5 & 10 %	Lie the
Landers, Frary & Clark's Peti oleumdis 50&10 %	Gen. Russia, No. 1 stained. 12/2 Galvanized. diss 33/4 Galvanized. diss 33/4
Taylor's Petroleum Faucets	6
Hrass Liquor Cocks	Galvanizeddis 331/6
Ment Cutters Dixon'sdu 25 %	Tin Ware.
Woodruffdis 25 %	Deep Stamped Plain and Retinned
Stowe	Com
Pt-V-te	Japanneddis 20
Condard dis 54	
Amburn Tool Co. " Hench	CTTTCACO
Planes.—Asbura Tooi Co "Bench dis 40 g Second Quality	CHICAGO.
Dailor 1103 P18063	
Evans Pat. Circuist net	(The Chicago Stamping Co., 72, 74 & 76 Lake St.)
strong twong - American dig 10 <	March 1, 1877.
Dutoher's	Tin Plate 14x20, 1XX, Ch' Best. 12
Dutcher with A create	10x14, IC, Ch'l, Good. 14x20, IXXX." 15
Plumbs and Levels. Adjustable	March 1,15/3.
Non-Adjustable	10x14 1x, " , 10 25 DX
Picks.—Philadelphia net	12x12, 1C 15 DXX 12
PicksPhiladelphia	LANTA IA
Pittaburga	14 m 1X " " 10 25 IX. " " 0
Rules-Boxwooddis 55&10 \$	20c25 IC, Charcoal Roofing, Good 14
Ivory	20x28, IC, 44 Best 15
Rakes. Cast Steel Garden dis 47@ 40&10 \$	20:225. IC, Charcoal Roofing, Good. 14 30:28. IC, Best 15 50:28. IX, " 19 10:14. IC, Coke Plates. 1 14:25. IC, " 1 10:22. IC, " 1 Hees Tin.— 24: Plars. 2
Malicable Garden	10x14, IC, Coke Plates
Wood Head Iron Testa	14x20, 1C, "
Steelvards American Patterndis 20 @ 25 5	10x20, IC 11;
₩ dox\$5 90 7 00 9 00 10 00 1 1 12 00 No 50 100 150 200 25 300 English Pattern	Large rigs 24c Bars
No 50 100 150 200 257 300	Email: 950
English Pattern	Zinc.—sheet, 300 to 1000 B. Casks
200 100 150 200 200 200	Loose Sheets
# doz\$740 8 67 10 67 12 67 14 67 16 7 No 50 100 150 200 200 200 Hart's Pattern	Slab Zinc or Spelter
No 50 100 150 30) 30 800	Sheathing
Beviles, Golden Clipper, Damascus Blade, Boxed	Planished
and Sharpened # doz #9:00	Boiler lengtos
Clipper No. 10, Bronze a Blade Boxed and	Bolt 2
Sharpened dog. 1908	Braziers' Sheets

and Sharpened.
Clipper No. 5. Painted Bea, Boxed and
Sharpened.
Clipper No. 5. Painted Bea, Boxed and
Sharpened.
Gas Stoel Scythes.
German **
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	Т
T	Dission's Circular Saws 44-08 (2-22-22-
	Dissection's Hand Panel and Rip, &c
10	Disaton's Circuiar Saws
	Extra discount on above for 10 days' cash, 5 s.
4C	Sad Irons.—Richmond (polished face)
e 03 150	Turkey Oil, No. 1. 25c Wasnita Extra. bet 35c
50	Hindustan 8 Inch. P # 14 @ 14c. net
50	United States and others in Combination, dis 60 %
00	Packers God list God 4/%5 k
50	Lalance & Grosjean fron. dis 20.85 s Lalance & Grosjean fron. dis 20.85 s by case. dis 20.85 s
50	Springs.—Gray's Door. \$2 15 @ \$2 25 Torry's Door. 2 15 @ 2 25 Gem. 2 05 @ 2 25
9 % 5 %	Stocks and Dies
5%	Dixon \$4.00 @ 425 \$573 @ 600 Try Equates, - Winterbottom dis 20 @ 20.610 \$
0%	Stanley Rule and Level Co. dis 45&10 % Willis Thrall, No. 2 dis 30&10 % Ulaston is No. 2 dis 30&10 %
0 %	Truck, dee.—Half Weight Tacks
0 %	Genuine Oneida—Newhouse
0%	Wrenches, Coes Genune 618 51 4 Coes Pattern Wrought Bar 618 506 10 8
0%	Girard Wrenches, Coe's Pattern 618 59&10 % Agricultural Wrench 88 60 85 40 net
0%	Traps. Gentine Oneida
net	Wire.— No. 0 to 18. No. 10 to 18. So 10 to 18. So 10 to 18.
5 %	Wire
5 %	Galvanized Wire No. 1 to 13 418 25 5 Wringers Noveity No. 10 \$85.00
2 0 E	Universal
10 % 10 %	BUFFALO.
10 %	Reported by Mesors, Sidney Shepard & Co. March 1, 1877.
10%	Bells, Cow—laws Genuine
5 %	Bells, Cow - \(\) \(\) \(\) as \$ 6 Genuine. \(\) \(\) \(\) dis \$3 \(\) \(\
10 %	Brick—Bath (box of 2 doz) Best English. 45 % Can Openers—Sprague's dis 55% 10 %
10%	Cases - Parior Coal Hod
old	Blanck
old	Cocks—Globe and Bibb. # 5 1345 Cutters—Meat, "Hales" dis \$5 % For Hearers—" Doyer" 40 %
in.	Elbows Corrugated
10 %	Adjustable

TOTAL TARIO.	- 1
Reported by Mesora. Sidney Shepard & Co.	1
March 1, 1877	ı
Bells, Cow—\ aw s Genuine	
Brick - Bakn (190x of 2 doz) Best English	
Slick's Carpenters Glis 99, 10 cit 10 Castings—Malleable F 5 750 Cocks—Globe and Bibb Glis 10 Cutters—Meat, "Hales 4/3 Egg Beaters—" Dover" Der Goz 84.6	The same of the same of
Elbows	0.00
Hinges, Gate—Shepard s	10.00
Fancy and Helmet. dis 15 3 and Irons. dis 15 3	00
Enameted. dis 50 3 Kulves. Orawing—Oval No. 1 dis 50 3 Kulves. Orawing—Oval No. 1 dis 60 1 (0c 10 9 Razor Blade dis 60c 10 4	10000
Machines—Apole Paring	
Horse, AusableNo. 5 7 8 9 10 30 27 25 24 25 296	,
Pointed & Polished	
1000 lbs	2
Paint—White Lead, U. S. Gov't. # \$ 886	0
Paint—White Lead, U. S. Gov't,	0.0000000
1000 lbs. 168 b	0.0000000000000000000000000000000000000
1000 lbs. 168 by	
1000 lbs. 100 lbs.	DANGER MANGELLANDER
1000 lbs.	CARCOLL SERGELLES SECONDS
1000 lbs. 168 cs. 16	CASCOLL SENSONSENSENSENSENSENSENSENSENSENSENSENSENSEN
1000 lbs.	
Bells, Cow—Yaw & Genutin.	CARCULA SANDOSASABERSENOCOSESSA SESTA
1000 lbs.	CASCULE SESSONESSESSESSESSESSESSES SESSON
## 1000 lbs	CASCCAS 5550055555555550000555555 56510000 00000

Antimony Babbit Metal-F. S. & Co. s.

Sheet Iron.		F	P	
	Common.	Smooth.	(themound)	Annista
No. 24	84c	11/4C	6 1/4 C	8140
No. 24 25 & 26 27	3%c	4%C	* 6%C	8360
Galvanized	Pron .	a c	0.26	13.17.17
No. 18 to 20	18	c.1 No.27		150
21 to 24		c 28		160
Russia Iran		1 No. 16	tates d	12
Russia Iron Perfect	14	c In Si	reets, ic. hi	gher.
American E	tussia	B	eo:a. to hig	ner10
Lend Pig Bar	756	Lead F	ipe, in full	coils 9
Wire-Bright				. dis 41
Coppered	********			dls 10
77	TOWN	-	~~~	
I.	ITTS	ROH	GH.	
The following of Lewis, Olive New York, Age	r & Phillip	ard rates, s, H. B. N	f. o. b. in P ewharl, 11 V	uttaburgt Varren St
Tron Torna ratio				

Coppereddls 10 9
PITTSBURGH.
The following are the Card rates, f. o. b. in Pittsburgh of Lewis, Oliver & Phillips, H. B. Newharl, 11 Warren St. New York, Agent.
Merchant Bar Iron 2 3 the rates net Plat Rail (3 % %), punched and coun sunk. 3 % % m net Iron Wedges 3 % % m net Iron Wedges 3 % % m net Iron Wedges 3 % % m net Iron Grow Bars (in ordering please state % % m net Iron Grow Bars (in ordering please state % % m net Beetle Rings 3 % % m net Beetle Rings 3 % % m net Beetle Rings 3 % of fine the Beetle Rings 3 % of fine the Beetle Rings 3 % of fine the Standard List Dissount of Standard List
Curriage and Tire Bolts, 75&5 2 off net. Stove Bolts. 40 % off net Elevator Bolts. 30 % off net Elevator Bolts. 30 % off net Machine and Square Head Bolts. 51 % off net Coach and Lag Screws. 51 % off net Bolt Ends. 61 % off net Bolt Ends. 74 % b 50 fn net Washers, all made from new band from 74 % b 50 fn net Washers, all made from new band from 74 % b 50 fn net Washers, all made from 15 % b 50 % see \$\cdot \text{b}\$ b \$\text{c}\$ for the Washers, all made from 15 % b \$\text{b}\$ b \$\text{c}\$ for the Washers in 23 bb, beyes, \$\text{b}\$ b \$\text{c}\$ for the Washers in 23 bb, beyes, \$\text{b}\$ b \$\text{c}\$ for the Washers in 23 bb, beyes

	racvator botts
1	Machine and Square Head Bolts 6) & off net
1	Coach and Lag Screws
1	Bolt Ends
ı	Pat. Hot Pressed Sq. and Hex. Nuts 71se & to off net
1	Washers, all made from new band fron . The P to off net
1	Nuts and Washers in 25 lb. bexes, kc W h ex. Nuts and
-1	Washers in lots less than one keg each size, Se P n ex.
1	Nuts and Washers in 5 lb. boxes, ic. & m ex. net prices.
1	Standard Caps, for Plows
1	Iron Harrow Teeth, in lots of 1 ton or more, packed to
-	The Land of the Control of the Contr
	20) 1b. boxes, 1 in. diam. 2%c & m net ; %, % in. diam.
1	2%c W m net: % in, diam, 3c W m net.
	Pat. Heades Harrow Teeth, packed in boxes &c & to ex.
	Skein Bolta, in bulk, in lots of I keg or n.ore at in diam
	Bac & D net: 9-16 in diam, 51cc & B net . L in diam
	6lgc @ m net. 1sc @ m extra when less than I keg of
	each size is ordered.
	Screw Hook and Eye Hinges, with Pat. Hooks, % to 1
	in. dlam., 75c & B net ; % in. dlam., 85cc & B net ; 56
	in diami, type w in net; 76 in diam, esec w in net; 56

ı	Screw and Strap Hinges-all sizes under 2s in, long have	l
	Pat. Hooks, It to 36 in. long, the W B net: 6, 8, 10 and	l
	12 in, long, 54c & to net.	ı
	Strap & T Hinges	ł
	Hereafter we will not make any allowance for freight	ł
	on Strap and T Hinges, our price on them is F. O. B. in Pittsburgh.	l
	Coil Chain, %, 51/c; 9-16, 51/c; 12, 6c; 7-16, 61/c; %, 61/c	ł
	5-16. 756c: 54. 9c P B net.	l
	Screw Hitching Rings, light, with 1/2 ring, No. 1, \$4:00 P	l
	100 net; heavy, with 5-16 ring, No. 2, \$4'50 @ 100 net.	l

н	100 net; neavy, with 5-10 ring, No. 2, \$4-50 % 106 net.
П	Bridge and Roof Bolts-
ı	1 to 2 in. diam. over 3 ft. long P B 356c n
	I to 2 in. diam. from 4 to 8 ft. long
ı	1 to 2 in, diam, from 1% to 4 ft, long " 4 c n
1	%, % and % in. dlam, over 4 ft, long " 41cc n
1	%, % and % in. diam. from 1% to 4 ft, long " twen
и	Bridge bolts with upset ends &c To the ext
1	Wrought Iron plates, punched450 70 70 70
	Cast Iron Washers & P. Steen
	Duck Nest Tuyere froms
	Wrought Iron Repair Liuks
	ings50 g off n
	" Lap Rings331/4 % off D
	WAGON HARDWARE

WAGON HARDWARE.		
Single Trees, Neck Yokes and Double Trees, made best selected Hickory, and froned complete, in most approved patterns.	fr In	on
No. 1 Southern Plow Single Tree, Ironed complete, frons all Wrought.	39c	nei
No. 2 Western Plow Single Tree, Ironed complete, Irons all Wroughtesch, 5 No. 3 Wagon Single Tree, Ironed complete,	Юс	net
Irons all Wrought, except Malleable Fer- rule	Юс	net
Irons ail Wrought: Improved End Pieces riveted on; one side acts as a wear iron for wheel to rub againsteach, t	60c	net
Neck Yoke, Ironed complete, Irons all Wt., except End Farrules, with Wt. Iron Gings.each, Southern Plow Double Treeeach,	DI YO	not
Wagon Box Strap Bolts-For Orders of 50 Set, 43 10 in, long by 7-16 at Screw End. Wast of 8 bears	di	B.

10 in	. long b	y 7-16 at	Screw	End,	# Bet	of 8 l	MILTE		43
12	8.5	36	44		6.6	R			43
10	65	9-16	60		6.0	R	6.0		63
12	66	9-16	0.0		81		44		
1.6	86	9-16	0.0		0.0	9	0.		47
10	6-9	96	4.6		46		44		500
19	0.0	22	8.0		0.0	0	0.6		505
14	86	12			0.0		8.0		M
16	44	20	0.0		44	60	6.6		19
10	6.5	23	65		64	10	04	1	
10 -	44	26	0.0			8]	1-
200		26				. 8		20 1	
DC & Bt	et for e	nch addt	tional	inch	over 1	123.	All	leng	13
made	e.	72 02							
Scre	w End.	Box Str							
Wrone	ght Iron	Bolster	Plate.	8. 23/	In. wie	le 10	ant.		43
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	61		4.0	91	44				27
	66		4.0	913	44	0.0			-
Wrone	sht Hor	nmor 626	rane h	0.79					,51
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.4	There	Years .	and I	gnt	**	eac	h	16	
		Irons							

	suo irone,	each			9 (
Double an	d Single T	ree Clips	, figure	e 1. each	B 6
69	64	86	64	2 each	9 (
6.8	4.6	63	64		11
Pole Caps	each			or caca.	100
Stran Hal	ta, Bolster	12tatus	Hamm	om Channe	Black Sand
Clure on	d Dole Cer	A INLES.	riamin	er Straps,	Run thous
CHES HO	d Pole Cap	ps, 10 1018	OF 301	sers	(H8 45 4
ror each	order amoi	unting to	きるか	net, or ov	er, for the
followin	g goods:	Wagon H	ardwa	re. Carrias	re and Tire
Bo'ts, I	divets. Ske	ein Bolts	. Nut	s, Washe	rs. Chairs
Bevel B	ox and Tor	igue Cap	Iron.	we will al	low an ex
tra disc	ount of 10	per cent	off a	Il Wagon	Har !ware
subject	to discour	t. compr	ige 1 in	the order	Johhor
who do	not deal in	tron. We	allow	to subst	tuto Strar
and T H	inges in If	on of B	to love	OF BUILD T	on one Car
Iron to	make orde	e ne to 4	O'M) me	os a ru	onkae cal
owton di	scount of	10 non our	ON W	oten und	recure the
CALLE OF	scount or	to ber cal	16.		
Single In	ee Hooks.	NOS. I an	0. 2		ch, 3%c ne
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Stay Chai	n Hooks			PR	ch. 3%c net
Wagon B	ox Rods,	narrow t	rack, v	with Pat.	
Collar					en. This not
Wagon B	ox Rods,	wide trac	k. w19	h Patent	and the me
Callan				or a mediate	- A

Contract to the contract to th
Wagon Brake Katchetseach, 7 c n
" finished with guard., each, 20c n
ingle Tree Iron, Wt. Hook, Malleable Fer-
ruleeach 714 p
single Tree Iron, Wt. % Hook and 7-16 Cilp. each, 7c n
lingle and Double Tree Iron, Wrought Cen-
ter Clip, % in. Welded, with 16 to Ring, each 10c n
Southern Plow Center Clip, 16 in, Welded, and 7-16
End Clip with 5-16 Th. Hook—per set of 3 pieces, 20c n
Neck Yoke End Ferruie, Malicable, with
Wt. Iron Ring each side n
Neck Yoke Attachment, with plates com-
pleteeach, 23c n
Axle Tree Chps, No. 1 each 2\c n
" No: 2 " Side n
" For Far n and Lumger Wagons.
Shank, 9-16 in flat part 1 /4 ineach, 6 /4 c n
Play and Wagon Clayion

California Tire Rivets and Burrs, 5-16.

wagon box staples, 1% to 2% in, to clinch. w 1000 \$10 75 net
" Bevel Box Iron, to rivet on. # 1000 7:25 net
Necz 1 oke Eyes, each
with % rings, each
King Bolts, %, 1, 1%, and 1% in. diam # 70 3160 net
Wagon Rivets, ex. large flat, oval and steeple
head, in diam., 1 in and longer " 7 c net
Wagon leivets, 3-16 in. diam., 1 in. and longer " 8 c net
Wagon idvets, 3-16 in. diam., 1 in. and longer " 8 c net
* Y to 1 inch long * D ic extra
" In 25 % wood " " 36c extra
Wagon and Hinge Naits, pointed by hand-
14 x8 and longer. 24 & 24 2 & 24 1 % and shorter.
11c W th. 13c W th. 15c @ th. 17c W th net
3-16x3 and longer. 2% & 2% 2% 2% 1% and shorter.
12c P m. 1fc P m. 1fc W m. 1sc W m net
Wagon Rivets and Nails, in less lots than
one keg each size # % %c extra
Double Tree Plates a 71/c net
Coupling " 14 416c net
Coupling 446 net
Neck YokePlates " 8%c net
Tongue Cap Iron, 1%, 3& 2% in. wide, same price W B as
No. 12 Band Iron.
Wagon Chains, Stay, Lock and Tongue, 5-16 in, * D 7c
net; ¼ in., 8c net.
Our prices are all subject to change of market, without
notice.

BURBER	BELTING,
BREEDINK	PACKING,
MINDLI	HOSE.
MUUPSA	Best quality.
	Lowest prices.
CHINY.	R. Levick, Son & Co
OGODO	724 Chestnut St.,
Agent NATIONAL RUBBER	Co. Philadelphia, Pa.

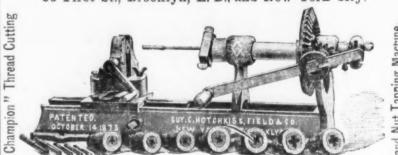
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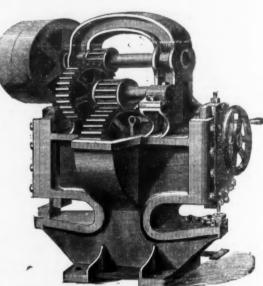
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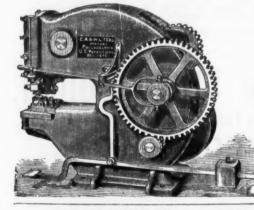
COMBINED PUNCH AND SHEAR.

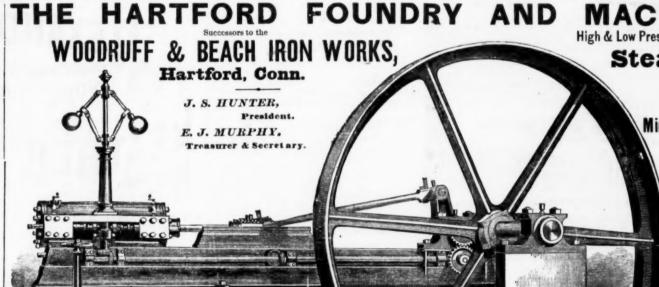
Our regular pattern for boiler makers will punch and shear in the center of 40 inches, will punch % inch hole in % inch and shear % inch plate; is provided with an automatic stop motion for Punch "Head" that can be set by the operator to stop the punch at any point of the stroke; as for different thicknesses of iron the punch can be set to stop within 1/2 of an inch of the iron after punching the hole, where it will rest until the work is adjusted for the next hole and the clutch thrown in. Is also provided with an adjustable stripper, a gauge and two "rests," one on each side of the die to support the work. Shears run while the belt is on the tight pulley, but the punch can be operated by the clutch. When desired, punch end of the machine is provided with heavy bolts, giving teninches reach to center of punch, and will punch 1 inch hole in 1 inch iron. We also make this machin with 12 inches reach on purch end, to punch I inch hole in I inch iron, and with shears set on an angle for splitting sheets and cutting off bars.

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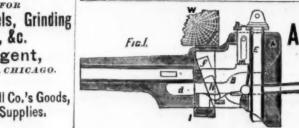


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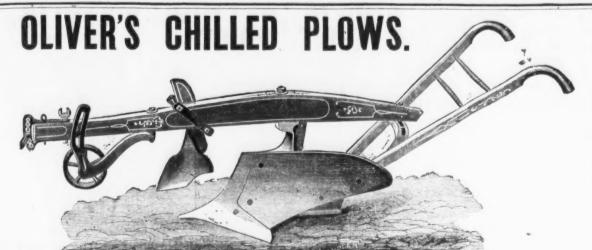
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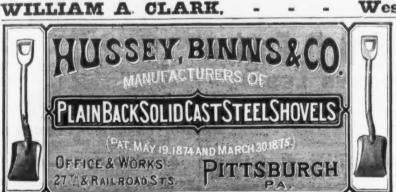


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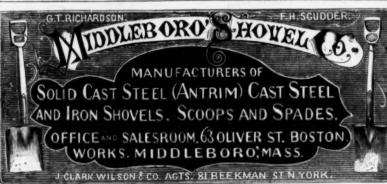
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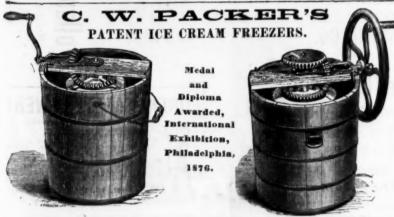
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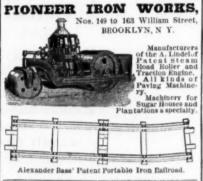
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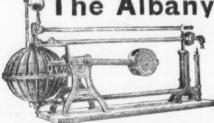
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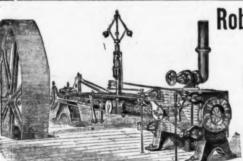
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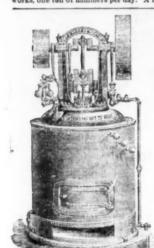
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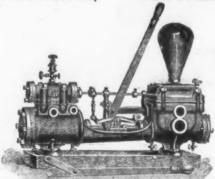
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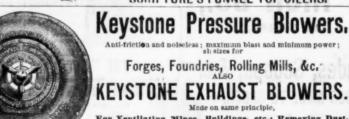
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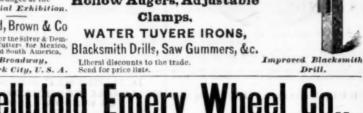


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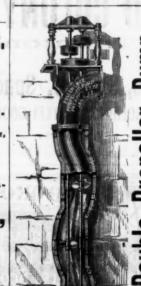
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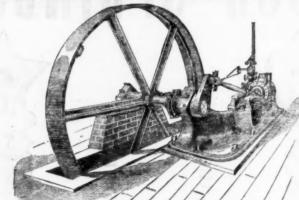
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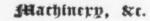


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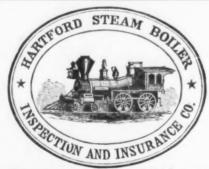
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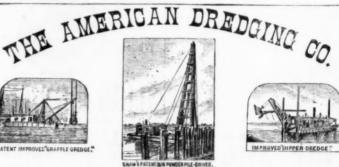
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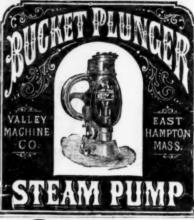
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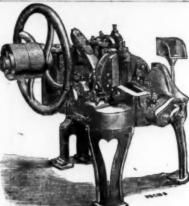
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